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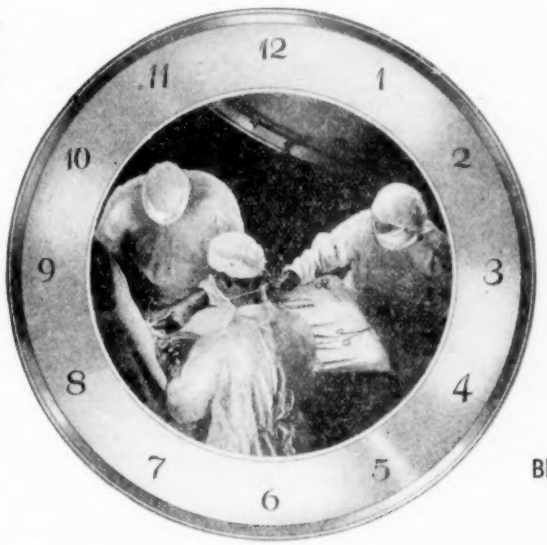

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THE LEYDEN TRADITION IN SOUTH AFRICAN MEDICINE

EDMUND H. BURROWS, M.B., CH.B. (CAPE TOWN)

Overseas Recruiting Mission, Chamber of Mines, The Hague, Holland

An interesting cultural link exists between the South African medical profession and the famous medical school at the centuries-old University of Leyden in the Netherlands. Up to about a hundred years ago it was considered proper for a Cape Dutch student to study at Leyden, and nowhere else in Europe.

Several reasons can be given for this fact. Until the arrival of the English settlers in 1820, the Cape of Good Hope—which by that date had been a British colony for 25 years—remained almost homogeneously Dutch in language and tradition. Although both had been considerably watered down and many if not all the Cape Dutch families had lost touch with their forbears in Europe, they nevertheless continued to look upon Holland as a sort of *Patria* whither they could sent their children to be educated. And of all the universities in the Netherlands, Leyden was undoubtedly the most illustrious.

The University was established by Prince William of Orange in 1575 to reward the stout burghers of Leyden for their valiant defence of the city against the Spaniards. The Stadtholder had offered them remission of taxes for 10 years or the gift of a university, and they had wisely chosen the latter. Within a few decades it became one of the most famous centres of learning in Europe. By the use of Latin as the academic language of the University and by holding its doors open to all who chose to enter them—Catholics, Protestants and Jews alike—Leyden maintained a universal tradition in an age when many other universities were losing it. In Italy, for instance, the old centres of learning had been forced by papal decree to exclude all non-Catholics. For this reason, perhaps, Leyden was the natural successor to Salerno, Montpellier and Padua as the medical centre of the world.[1] To the lectures of its famous teachers such as Sylvius (1614-1672), Ruysch (1638-1731) and Hermann Boerhaave (1668-1738) flocked students from many foreign countries—England, Hanover, Scotland, America—and also from the Dutch colonies.

In the *Album Studiosorum Academiae* (1575-1875)[2] of the University are entered the names of about 100 Cape-born students, most of them designated *e Promontorio Bonae Spei*, but several *in Capite Bonae Spei natus Africanus*, and one or two simply *Africanus*. The names are spread over the last golden era of the University, roughly from 1760 to about 1860, when in fact the glory had already departed. Whereas in 1750 the majority of the students were still foreigners hailing from places as far apart as Ceylon and Rio de Janeiro, Moscow and Dublin or *Edinburghensis*, the onset of the nineteenth century saw them rapidly disappear, and by 1850 students *e Promontorio Bonae Spei* stand out prominently from the solid phalanxes of Dutchmen, *Haganus* and *Amstelodamensis*.

In the century between 1766 and 1866, 28 Cape-born students were enrolled in the medical faculty at Leyden University:

Weitner (Weidner), Didericus (1749-) 12 September 1766 and 22 November 1771.
Van Nierop, Cornelis Johannes (1755-) 1772.
Persoon, Cornelis Johannes (1763-) 27 September 1786.
Berrangé, Antonie (1773-) 24 August 1792.
Trüter, Petrus Johannes, Jr. (1776-1867) 18 August 1794.
Kuijs, Arnold Philippus (1779-) 16 September, 24 May 1794 and 31 May 1803.
Gilquin, Philippus Henricus (Hermannus) (1788-) 8 October 1810 and 31 October 1814.
Van Oosterzee, Johannes Knockers (1793-1829) 7 November 1814.
Flech (*sic*), Christiaan (1810-1870) 6 September 1827.
Biccard, Franciscus Ludovicus Carolus (1809-1884) 16 September 1829.
Fraenkel, Didericus (1811-1861) 19 July 1832.
Maasdorp, Gijsbertus Henricus (1814-1888) 16 June 1833.
Flamme, Johannes Fredericus Josephus (1813-) 1 March 1834.
Kuijs, Michael Jacobus (1814-) 10 May 1834.
Roux, Jacobus Petrus (1815-) 13 May 1834.
Dreijer, Johannes Albertus (1813-) 3 September 1834 and 1 July 1842, *Chir.*
Dreijer, Hermannus (1813-) 3 September 1834.
Smuts, Cornelis (1819-) 1 September 1837 and 17 April 1844, *Chir.*
Smeets (*sic*), Janus (Johannes) (1819-) 5 September 1839 and 10 March 1844.

Fleck, Franciscus le Sueur (1821-) 8 September 1838.
Glaeser, Louis William (1822-1883) 19 September 1840.
Herman, Johannes Zacharias (1828-1879) 22 September 1847.
Biccard, Carolus Guilielmus Talma (*sic*) (1835-) 17 August 1852.
Biccard, Francois de Lettre (1839-1880) 23 June 1855.
Kotze, Christophorus Casparus Joannes (1839-) 25 July 1856.
Zeederberg, Rudolf Abraham (1841-) 17 September 1858.
Schomberg (*sic*), Nicolaas (1842-) 26 May 1860.
Du Toit, Ernestus Fredericus (1843-) 13 June 1862.

While the 28 names cover an entire century, nearly half of these medical students attended the University between 1827 and 1840. This 13-year period—beginning a full quarter-century after the British had settled permanently at the Cape—was also the most popular for Cape students in spheres of study other than medicine, e.g. mathematics, jurisprudence and theology. A graph drawn for the century (1766-1866) peaks in the 1830s, when there were more than 30 Cape students at the University at the same time: in 1834, for example, there were probably at least 7 medical students alone. Thereafter the graph declines steadily until in 1863 not a single one remained—probably for the first time in the course of the century.

The reason for the South African students—as they were then already called—forsaking Leyden at that time is obvious. At the Cape, the process of anglicization and assimilation into the English colonial hierarchy that had started after 1820 was beginning to make itself felt. Many descendants of the original Dutch settlers, particularly the affluent, social-minded families around Cape Town, were proud to call themselves colonials, and it was only natural that they would send their children—if they had to be sent anywhere—'home' to Britain to be educated. Another factor, namely, the powerful influence of the Scottish Presbyterian ministers imported to fill the pulpits of the Dutch Reformed Church, probably helped to guide the majority to the north of the Tweed. It was these home influences, rather than the shift of the medical centre of the world from Leyden to Edinburgh, that diverted the bulk of the medical students from the Cape Colony across the Channel. Jacob Versfeld, M. D. (Edinburgh, 1825) was probably the first Cape student to qualify at a British medical school; but as the century wore on and the movement gained momentum the numbers at Edinburgh increased, until by 1880 the Scottish capital had completely replaced Leyden as the school of choice for South African medical students.

The influence of Leyden University upon South African medicine extends far beyond the individual contirbutions of its graduates in their fatherland. In a sense the small band of doctors that returned home in the 1830s were the true pioneers of South African general practice, for they formed the vanguard of regularly qualified practitioners that went inland, gradually to oust the quack and the barber surgeon from the Cape countryside. The wave of practitioners preceding them had been mostly discharged regimental surgeons; some of these were good and some were very bad, and none remained long in the same place. The Leyden men, on the other hand, tended to settle and stay—at once a stabilizing influence. Thus, the Smutses were at Paarl (Johannes) and Stellenbosch (Cornelis) for over 25 years; J. A. Dreyer was district surgeon of George for 23 years; G. H. Maasdorp remained at Graaff-Reinet, Kuys and Glaeser at Worcester, where their descendants flourish to this day; and so on. Together with several immigrant British practitioners such as Dr. White of Swellendam and Christie of Beaufort West, they provided the first stable pattern to rural medical practice at the Cape and helped to banish the quack to the frontiers of the Colony.

Since most of them were sons of the local aristocracy, the highly-respected ministers of the Cape Church, or the equally regarded *koopmans* of Cape Town, they automatically commanded the respect of the burghers, and this in turn can only have enhanced the prestige of their profession. The Biccard *stamvader* was a leading Cape physician highly thought of by the British commanders, and his medical dynasty has survived to the present day. The pulpit of the Cape Church had been occupied by a Fleck, Kuys or Berrangé for decades, and families such as the Truters and the Smutses were almost as old as the settlement itself. L. W. Glaeser was the son of a discharged regimental surgeon who had married a Cape lady, and Didericus Fraenkel the offspring of the first Jewish doctor (and one of the first Jews) to settle at the Cape.

The most famous of all the Cape medical students at Leyden was one who never returned, and died—the creator of a new branch of scientific knowledge, yet forgotten and penniless—in a Paris garret in 1836. He was C. H. Persoon, 'the father of modern mycology', who was born in Cape Town in 1762 and who has been acclaimed the greatest genius ever to come from South Africa;[3] yet few people have ever heard of him.

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3. Franken, J. L. M. (1937): Annale van die Universiteit van Stellenbosch. **15**, B, 4.

UNION DEPARTMENT OF HEALTH BULLETIN

Union Department of Health Bulletin. Report for the 7 days ended 1 March 1956.

Plague. Smallpox. Typhus Fever: Nil.

Epidemic Diseases in Other Countries.

Plague: Nil.

Cholera in Dacca (Pakistan).

Smallpox in Herat, Kabul, Kandahar (Afghanistan); Moulmein, Rangoon (Burma); Phnom-Penh (Cambodia); Ahmedabad, Bombay, Calcutta, Kandhla, Kanpur, Madras (India); Chittagong, Dacca (Pakistan); Hué, Saigon-Cholon (Viêt-Nam); Nairobi (Kenya).

Typhus Fever in Alexandria, Cairo (Egypt).

South African Medical Journal

Suid-Afrikaanse Tydskrif vir Geneeskunde

VAN DIE REDAKSIE

KROONSLAGAAR-HARTSIEKTE EN DIE VOEDSELVETTE

In naasteby die laaste halfeeu het die statistiese patroon van sterftes in die gemeenskap verander weens 'n daling in mortaliteit van sommige siektes en 'n toeneming daarvan by andere. Op die voorgrond onder die klein aantal siektes wat meer gedugte doders geword het is kroonslagaar-hartsiekte, waarin daar 'n onrusbarende toename was. Dit is 'n hoogs kieskeurige siekte, hoofsaaklik beperk tot middeljariges en bejaardes, en meer algemeen onder mans as onder vrouens. Die voorkomssyfer is hoogste by die ryker en meer gegoede rasse en stande.

Die patologie koppel kroonslagaartrombose aan vervetting van die kroonslagare, en waarskynlik aan 'n groter neiging van die bloed om te stol. Dit is deur epidemiologiese studies aangetoon, veral deur dié van Ancel Keys, dat daar by verskillende gemeenskappe 'n wisseling in die voorkomssyfer van vervetting is wat ooreenslaan met die variasie in (die voorkoms van) kroonslagaar-hartsiekte.

Afgesien van onbeheerbare faktore soos geslag en oorerflikheid (sommige families is blykbaar meer vatbaar as ander), het sekere beheerbare omgewingsfaktore agterdog verwek—veral die dieet, gebrek aan liggaamsoefening, beroepspanning, emosionele spanning en kwaai tabak rook. Oor die algemeen is die omgewingsfaktore sterker as die aangeborenes; kroonslagaartrombose is byvoorbeeld meer algemeen by vrouens van bevoorregte gemeenskappe as by mans van onbevoorregte stande. Die dieet is die belangrikste en mees geredelik beheerde van die omgewingsfaktore.

Die moderne gekunstelde diëte verskil in verskeie opsigte van die voedingswyses van armer gemeenskappe. Gewoonlik bevat hulle meer vet en proteïene en minder stysel en sellulose. Vetstowwe is die dieetfaktor waarop die meeste agterdog rus. Keys het aangetoon dat daar 'n noue ooreenkoms tussen die hoeveelheid vet in die dieet (die vetstof-kalorie-verhouding) en die voorkoms van kroonslagaar-hartkwaal is. Hierdie verwantskap word blykbaar bemiddel deur die peil van cholesterol in die bloed, wat by natuurlike en sosiale groepe fyn tred hou met die hoeveelheid vet in die dieet en die voorkoms van kroonslagaarsiekte. Die voorkomssyfer van kroonslagaarsiekte is laer in groepe met 'n laer bloed-cholesterol-peil. Dit is reeds bewys dat die bloedinhoud van cholesterol beheer kan word deur die hoeveelheid vet in die dieet te wissel, en daar is heelwat

EDITORIAL

CORONARY HEART-DISEASE AND DIETARY FAT

The pattern of the death statistics of the community has changed in the past half-century or so owing to a waning mortality from some diseases and a waxing of others. Conspicuous amongst the few diseases that have become more formidable killers is coronary heart-disease, which has increased to an alarming extent. It is a highly selective disease, mainly confined to middle age and old age and commoner in men than women, and its incidence is greatest in the richer and more privileged nations and classes.

Pathology associates coronary thrombosis with atheroma of the coronary arteries and probably with a heightened tendency of the blood to clot. Epidemiological studies, particularly those of Ancel Keys, have shown that the extent of atheroma varies in different communities in a way parallel to the variation in coronary heart-disease.

Apart from sex and inheritance (certain families seem to be more susceptible than others), which are uncontrollable factors, certain controllable environmental factors have fallen under suspicion, particularly diet, lack of physical exercise, occupational tension, emotional stress, and heavy tobacco smoking. The environmental factors tend to override the innate ones; for instance, coronary thrombosis is commoner in women of privileged communities than in men in under-privileged communities. Of the environmental factors diet is the most important and the most easily controllable.

In various ways modern sophisticated diets differ from the diets of poorer communities. They usually contain more fat and protein, and less starch and cellulose. Fat is the dietetic factor most under suspicion. Keys has shown there is a close parallelism between the amount of fat in the diet (the fat calorie-ratio) and the incidence of coronary heart-disease. This interrelationship seems to be mediated by the level of cholesterol in the blood, which in natural and social groups closely parallels the amount of fat in the diet and the incidence of coronary disease. In groups with lower blood-cholesterols the incidence of coronary disease is lower.

getuienis—miskien nie afdoende nie—dat die groot inname van vet en die hoë peil van bloed-cholesterol verantwoordelik is vir die toenemende voorkomssyfer van slagaarvervetting en dus ook van kroonslagaarsiekte.

Daar was 'n vermoede dat diervette meer nadelig is in die veroorsaking van kroonslagaarsiekte as plantvette. Werkers in Professor Brock se departement by die Universiteit van Kaapstad (Bronte-Stewart, Antonis *et al.*) het onlangs aangetoon dat vette wel in hierdie opsig verskil, en dat die verskil nie by die dierlike of plantaardige oorsprong berus nie, maar by die chemiese kondisie van versadiging of onversadiging, en miskien ook by die kettinglengte. Oor die algemeen blyk dit dat versadigde vette, in teenstelling met die onversadigde vette, die bloed-cholesterol vinnig laat styg, en dat sommige onversadigde vette miskien in staat is om die liggaam teen die aksie van versadigde vette te beskerm. Hoofsaaklik is die diervette versadig en die plantvette onversadig. Algemeen gesproke is versadigde vette solied en onversadigde vette vloeibaar. In die voedselbedryf word plantvette dikwels gehidreer om hulle te versadig en te verhard en hulle sodoende sekere voordele by die voorbereiding van voedsel te verleen. Die werk wat in Kaapstad gedoen is het aangetoon dat gehidreerde (verharde) grondboontjievet die bloed-cholesterol vermeerder terwyl natuurlike grondboontjievet feitlik geen effek op die bloedinhoud daarvan het nie.

Ook is dit bewys dat marine visolies, en tot 'n mindere mate ook marine soogdiere soos robbe en walvisse, betreklik onversadigde vette het, soms so onversadig dat hulle blykbaar in staat is om die aksie van versadigde vette te neutraliseer. Miskien is dit die rede waarom die Eskimo's nie as gevolg van hulle besonder vetryke dieet ly nie. Dit is dus onlangs voorgestel dat sekere marine olies, net soos sekere plantolies, skadeloos is wat kroonslagaarsiekte betref, en dat hulle moontlik selfs 'n beskermende aksie besit.

Weens hierdie stellings ontstaan die vraag: Watter raad moet die geneesheer insake die dieet aan sy pasiënt gee, en watter propaganda, indien enige, moet by die publiek gemaak word? Die Unie Departement van Voeding het reeds 'n verklaring gedoen oor die laasgenoemde aspek, en dit verskyn op bladsy 276 in hierdie uitgawe van die *Tydskrif*. Dit is 'n deurdagte en beheersde uiteensetting van die huidige opvatting van die probleem. Dit moet onthou word dat navorsing op die verband tussen dieetvette en kroonslagaarsiekte nog maar in sy kinderskoene is en dat verdere ondersoek nog ingestel moet word. Dit is nog glad nie seker dat ander bestanddele van die dieet, sowel as faktore buite die dieet, nie ook 'n strekking op hierdie siekte het nie. Die praktiserende dokter wat bekend is met die feite soos ons hulle vandag begryp moet self oordeel as hy sy pasiënte raad gee. Wat publieke propaganda betref is versigtigheid raadsaam. Ons lesers sal onthou hoe menings omtrent die dieet verander het en nou nog verskil, bv. oor babavoeding en die regte dieet vir middeljariges en bejaardes (wat koolhidrate en proteïene sowel as vetstowwe betref) en die belangrikheid van liggaamsgewig op hierdie ouderdomme; oor witbrood teenoor bruinbrood; wit vleis teenoor rooi vleis en die effekte van vleis ryk aan kernproteïene, ens. Hierdie meningsverskille is 'n probleem vir die leek, wat nog verder

It has been shown that the level of blood cholesterol can be controlled by varying the amount of fat in the diet, and there is a good deal of evidence—not perhaps final—that the high fat-intake and the high blood-cholesterol are responsible for the increasing incidence of atheroma and therefore of coronary disease.

It had been suspected that animal fats might be more harmful than vegetable fats in the production of coronary disease. Workers in Professor Brock's department at Cape Town University (Bronte-Stewart, Antonis *et al.*) have recently shown that there is a difference in this respect between fats, and that the difference is dependent not upon their animal or vegetable origin, but on the chemical state of saturation or unsaturation, and possibly on chain-length. In general it appears that saturated fats push the blood cholesterol up rapidly, but not so the unsaturated fats, some of which appear to be able to protect the body against the action of saturated fats. Broadly, animal fats are saturated, while vegetable fats are unsaturated, but there are important exceptions; for example butter and palm oil have about the same degree of saturation. In general, saturated fats are solid and unsaturated fats liquid. The food industry often hydrogenates vegetable fats so as to saturate and harden them, which gives them certain culinary advantages. The Cape Town work has shown that hydrogenated (hardened) peanut fat increases the blood cholestrol, while natural peanut fat has little or no effect on its level.

It has also been shown recently that marine fish oils, and to a less extent marine mammals such as seals and whales, have relatively unsaturated fats, some so unsaturated as apparently to be capable of neutralizing the action of saturated fats. Possibly this is why Eskimos do not suffer as a result of their extremely high-fat diet. It has recently been suggested, therefore, that certain marine oils, like some vegetable oils, are harmless as regards coronary disease, and may even have a protective action.

In view of these pronouncements the question arises, what advice on diet and coronary disease should the doctor give his patient, and what, if any, propaganda should be put out to the public? On the latter point a statement has already been issued by the Union Department of Nutrition, which is published in this issue of the *Journal* (page 276). It is a well considered and restrained exposition of the position as at present understood. It must not be forgotten that research concerning the relation between dietary fat and coronary disease is still in a preliminary stage and that further investigations remain to be made. It is by no means certain that other constituents of the diet besides fat may not have a bearing on the disease, as well as non-dietary factors. The practising doctor, aware of the facts as far as they are understood, will use his own judgment in advising his patients. As for public propaganda, caution is to be recommended. Our readers will remember how opinions on diet have changed, and continue to vary; for example, on infant feeding and on the correct diet in middle age and old age (as regards carbohydrates and proteins as well as fats) and the importance of body-weight at these ages, on white bread *versus* brown bread and white meat

verwar en selfs mislei word deur die menigvuldige gereklameerde voedselgiere wat blykbaar nie die minste wetenskaplike grondslag het nie. ‚Op hierdie stadium van hoopvolle onsekerheid' (omtrent vette en kroonslagaarsiekte) ‚is dit gerade om mense te waarsku teen dieetgiere en kwaksalwers . . . Dogmatiese verklarings op hierdie tydstip sal waarskynlik onjuis en selfs misleidend wees. Verstandige persone sal hul dit eenvoudig ten doel stel om redelike matigheid in hul lewenswyse te handhaaf ten opsigte van spanning, oefening, dieet en rook.' (Brock-vertaald.)

versus red meat, and on the effects of meat rich in nucleoproteins, etc. The variations are puzzling to the layman, who is also confused, if not misled, by many publicized dietary fads which apparently have no scientific foundation whatever. 'In this state of hopeful uncertainty' (as regards fats and coronary disease) 'it is best to warn people against dietary fads and quacks. Dogmatic statements made at this time are likely to be incorrect and even misleading. Wise people will aim simply at sensible moderation of their lives in respect of tension, exercise, diet, and smoking' (Brock).

THE MANAGEMENT OF HYPERTENSION IN GENERAL PRACTICE*

W. F. SCOTT, M.D. (RAND), M.R.C.P.

Johannesburg

The reduction of blood pressure in the hypertensive patient is desirable in patients manifesting symptoms of giddiness, noises in the head and headaches, and in whom a small reduction in blood pressure will usually give relief. Mortality is highest when the diastolic level is above 130 mm. Hg and where gallop rhythm, left ventricular strain, considerable albuminuria and retinopathy are present. With such findings adequate lowering of the blood pressure is beneficial and, no matter what the aetiology, simple lowering of the blood pressure is attended by improvement.[1, 2]

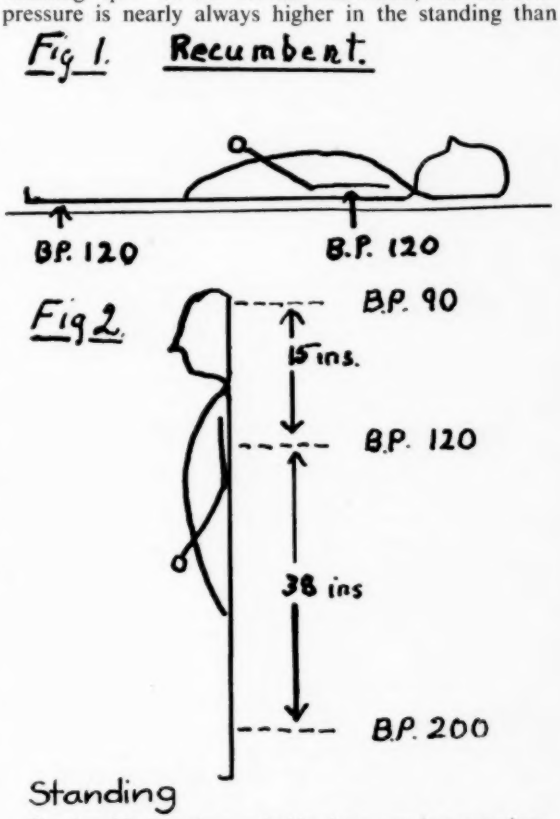
Cerebral oxygenation, reduced to a dangerous level in the erect position, is the factor which limits the extent to which the blood pressure may be lowered. At the same time the lower the blood pressure is reduced, provided it is not below the limits of safety, the greater the relief.

In the use of blood pressure reducing drugs, the measurement of the effect of the drugs by taking the blood pressure with the patient in the horizontal position only is unsatisfactory, because some patients who show little or no fall in blood pressure when horizontal, when erect, develop lassitude or giddiness, lose consciousness or develop cerebral thrombosis.

BLOOD-PRESSURE READINGS IN NORMAL INDIVIDUALS

A case is presented here for taking the blood pressures in the lying position and in the standing position with the arm resting out laterally from the body at shoulder level, i.e. in 90° abduction so that the degree of hypotension can be better controlled, particularly in relation to cerebral blood-pressure. Blood pressures are measured by the method recommended by the Committee for the Standardization of Blood Pressure Readings.[3]

The hydrostatic effect of gravity on the column of blood above or below the heart causes a gradient of arterial pressure throughout the body. For every 15 inches of vertical height above the heart level there is a reduction of local blood pressure of about 30 mm. Hg, and below heart-level the pressure is raised by a similar amount. This effect of gravity influences the blood pressure in the brain in the erect position. At heart-level the blood pressure remains constant but elsewhere, unless the body is horizontal, there is a gradient of arterial pressure. Figs. 1 and 2 illustrate the changes in the blood pressure in a conscious man lying down and standing up.[4] In the normal individual, the diastolic pressure is nearly always higher in the standing than



Figs. 1 *and* 2. The changes in blood pressure in a conscious man recumbent and standing (Enderley).

* A paper presented at the South African Medical Congress, Pretoria, October 1955.

in the recumbent position (with the reading taken in the antecubital fossa with the arm adducted), and the systolic pressure is usually higher in the standing position, but may be lower if the blood pressure in the recumbent position is already low.[5] By taking the blood pressure while standing, with the arm supported in 90° abduction, this initial confusion is eliminated, and an assessment is also obtained of the hydrostatic pressure-gradient in the body between the heart and the head, and so an indication of the cerebral blood-pressure. By actually holding aloft the arm of the erect patient, the blood pressure taken at the antecubital fossa is at the same level as the brain and so gives a reading approximating to that in the brain. The disadvantages of this position are its awkwardness, especially in the elderly, and the fact that the muscular stresses involved must affect the reading.

The average of the blood pressure taken in the horizontal position in 18 apparently normal individuals with the arm adducted, in 90° abduction, and in 180° abduction are shown in Table I. It is apparent that there is very little difference in the pressures. A comparison

TABLE I. BLOOD-PRESSURE (MM. HG) IN RECUMBENT POSITION IN NORMALS

Figs. 1 *and* 2. The changes in blood pressure in a conscious

With arm adducted	*With arm in 90° abduction*	*With arm in 180° Abduction*
139/82	144/83	139/81

TABLE II. BLOOD PRESSURE (MM. HG) IN RECUMBENT AND STANDING POSITIONS IN NORMALS

Recumbent	*Standing*		
	Arm adducted	*Arm in 90° abduction*	*Arm in 180° abduction*
146/85	141/91	134/81	125/70

of the average blood-pressure taken in 30 apparently normal individuals recumbent; and standing with the arm adducted, in 90° abduction, and in 180° abduction, is shown in Table II, where the hydrostatic pressure-differences are apparent. Both the young and the old may show big differences between the lying and standing blood-pressures.

Vasomotor control is responsible for maintaining the lumen of the dependent small arterioles and veins against the dilating effect of gravity and, by combating the pooling effect of gravity in the dependent parts and splanchnic area, ensures an adequate venous return in all positions, and consequently ensures a sustained output and sustained arterial blood-pressure. The heart can thus deliver sufficient blood to the brain in the upright position, although the pressure will be about 30 mm. Hg lower than at heart-level. In the young untreated hypertensive the lying and standing blood-pressures are closer to each other than in normals, but in elderly hypertensives the differences may be great.

BLOOD-PRESSURE READINGS AFTER ADMINISTRATION OF BLOOD-PRESSURE REDUCING DRUGS

A similar gradient of pressure exists after the administration of blood-pressure reducing drugs, with the difference that the vasomotor paralysis induced by the drug inhibits the compensating vasomotor reflexes with resultant pooling, diminished venous return, diminished cardiac output, and consequently a fall in blood pressure in all positions, but most pronounced in the erect above heart-level.

A reduced blood-pressure at heart-level may be adequate for the metabolic requirements of all organs when the body is horizontal, but may not necessarily be so when the body is erect. The erect posture may reduce local pressure in the elevated regions of the brain to such a level that the circulatory requirements cannot be met.

Blood-pressure determinations in the erect position are not an exact indication of the degree of cerebral oxygenation, bedevilled as this is by variations in cerebral metabolism, cerebral oxygen extraction, arterial oxygen saturation and cerebral blood-flow, and the vascular supply of the brain has not been sufficiently explored in controlled hypotension to ensure that, without doubt, there is no alteration in vascular dynamics such as, for example, an arterial shunt mechanism.[6]

Cerebral function in conscious healthy adults is slightly impaired when the blood pressure in the erect posture falls to 60 mm. Hg,[7] and electro-encephalographic evidence supports the view that 55 mm. Hg systolic is the critical level.[8] Findings with the total oxygen consumption show that a net debt is incurred at pressures below 55-60 mm. Hg under light anaesthesia, and the debt is discharged when the pressure is restored to higher levels. We must insist that our limits of safety are on the high side, and as far as possible should be

TABLE III. SHOWING THAT THE DIFFERENCE BETWEEN LYING AND STANDING BLOOD-PRESSURES INCREASES AS THE PRESSURE IS REDUCED (ARM IN 90° ABDUCTION)

	Highest blood-pressures untreated		*Lowest blood-pressures treated*	
	Lying	*Standing*	*Lying*	*Standing*
B.A.I. ..	240/160	260/160	154/120	120/86
P.O.R. ..	180/140	160/110	150/100	120/80
J.A.M. ..	240/130	240/120	174/100	204/100
L.I.N. ..	150/100	140/100	138/92	120/80
F.E.A. ..	198/94	180/80	185/110	120/80
R.O.B. ..	220/120	200/120	150/110	110/80
B.E.R. ..	195/105	180/110	170/90	110/70
S.C.H. ..	225/130	220/120	230/130	190/120
C.A.R. ..	200/110	220/110	180/100	160/100
Average of the 9 patients ..	205/121	200/114	170/106	139/88

based on experiments and not assumption.[9] The critical level of hypotension in each individual will vary with the amount of vasodilation of which he is capable, something which cannot be assessed until the drug has been used, although high pressures fall further from the use of hypotensive drugs in older than in younger people. In Table III are shown the highest blood-pressures in 9 hypertensives with the arm out at right angles to the body, not on hypotensive drugs, in the lying and standing positions, and the lowest blood-pressures in the same group under treatment.

The difference between lying and standing blood-pressures gives an assessment of the efficacy of the drug

in treatment, for the greater the reduction in pressure the greater the difference between the lying and standing blood-pressures. In patients taking effective doses of hypotensive drugs the alteration in blood pressures with change of position is rapid; and therefore the blood-pressure readings taken in quick succession afford a fair estimate of the effect the drug is having. One feels that it is unwise to reduce the systolic pressure to less than 150 mm. Hg standing. This allows a margin for any further fall which may occur, in rapid resumption of the upright position, in hot or stuffy atmospheres, on prolonged standing, and after alcohol. The patient should be warned that a combination of these circumstances may, while he is taking hypotensive drugs, reduce his labile blood-pressure to a dangerous level, and that should he experience symptoms he should sit, or if necessary lie down, immediately.

Griffiths[10] has pointed out the added danger of a fall in blood sugar with the administration of Methonium and, as the brain is intolerant of hypoglycaemia, it is unlikely to be able to withstand the combined action of extreme hypotension and hypoglycaemia at the same time without showing symptoms.

Because blood pressures are notoriously variable, the general practitioner is probably the person best placed to regulate the hypertensive's blood pressure and life. For, to know how effective drug treatment is, it is necessary to take many readings over many months, at different times of the day in the patient's own environment. As many patients with long-standing hypertension, have some degree of left ventricular failure, pulmonary oedema unrecognized clinically may be produced, and mercurial diuretics are valuable adjuncts to treatment. It is also necessary to know the factors producing stress in the patient's life; to be able to discuss them; to advise and, when appropriate, administer sedation, or temporarily increase the dosage of the hypotensive drug. His remaining life-time is in fact one of constant adjustment.

Vegolysen Retard

Vegolysen Retard, given by subcutaneous injection, is a satisfactory drug. Given 8-hourly in a well-adjusted dose it produces a satisfactory fall in blood pressure over most of the 24 hours. Even the most stoic patients, however, seem to revolt against the injection regime sooner or later.

Serpasil

The action of Serpasil is central, on the sympathetic ganglia in the mid-brain, and it is its depressing of this centre which is responsible for the hypotensive action. Evidently, under certain conditions and in some patients, the hypotensive activity of Serpasil is potent. Many patients are resistant at dosages which produce no side-effects. The fall in blood pressure is frequently preceded by flushing, which is ancillary evidence of distinctive action on the vascular system. In the recommended daily doses of 0·75-1·5 mg., Serpasil frequently does not produce impressive falls in blood pressure, and often doses as great as 3 mg. a day do not produce a satisfactory fall. By the time these large doses are used most patients exhibit side-effects such as conspicuous conjunctival congestion, nasal blockage, sensation of fatigue and sleepiness, *depression*, shivering, restlessness, nausea, vomiting and diarrhoea, and a feeling of heat within one or two hours of the administration of Serpasil.[11] When, after the blood-pressure has been reduced by Serpasil, and the drug is discontinued, a significant fall in blood pressure often persists for 12 and sometimes 24 hours.

Ansolysen

Ansolysen (pentapyrrolidinium bitartrate, M. and B. 2050A) is usually effective in reducing blood pressure. An effective oral dose lies between 30 and 2100 mg. daily. It is recommended that the drug should be given thrice daily before meals. But many patients living active lives find it difficult to remember to take tablets before meals. I have found a satisfactory alternative regime is to take the oral dose with early morning tea, mid-morning tea, mid-afternoon tea and last thing at night.

Significant falls in blood pressure are obtained with as little as 5 mg. 4 times daily but, if the patient's resistance to the drug is high and as the tolerance to the drug (which eventually reaches a level) develops, doses as high as 700 mg. may be required for a single dose.

The advantage of Ansolysen over the other methonium drugs is the relative absence of side-reactions, particularly constipation, diarrhoea, mouth dryness and visual disturbances. The maximum effect of Ansolysen is at 1½-3 hours after oral administration, but it remains in the system for about 6-8 hours, and the duration of the fall in blood pressure depends largely on the dose and on capricious absorption from the alimentary canal. Even when the effect of Ansolysen has worn off, as judged by the blood pressure, some may still be retained in the system so that the subsequent doses during the day may have to be reduced.

In hospital practice it is probably good to give a subcutaneous dose of 4 mg. and measure the effect on the blood pressure over the first 4 hours, or do the same with an oral dose of 40 mg., but in general practice the facilities seldom exist for this assessment. It is practical, therefore, to start with a small dose of (if deemed necessary) 5 mg. daily, which can be increased by 10 mg. every few days. Frequent blood-pressure readings taken at the same time every few days will establish the effect of and required increase of dosage of the drug. The blood pressure should be taken at a time when the effect on the blood pressure is known to be maximum after the dose. After 10 minutes' rest, the lying blood pressure is taken and, after standing for 60 seconds, the blood pressure is again taken with the arm in 90° abduction. The standing test,[12] in which the dose is increased until the patient experiences hypotensive symptoms on standing for 60 seconds, has the objection of giving no information of how progress is being made between the hypertensive state and the hypotensive state where symptoms are experienced. The first symptom experienced may be a 'black-out' or vascular occlusion, and not the symptoms of faintness and languor. Although in most patients there is a comparatively narrow margin between the dose which has an inadequate effect and that which has an excessive one,[12] it is not so small that the progress from one to the other cannot be followed by

the method of taking the blood pressures as proposed above, and so making for better blood-pressure control.

Where patients are resistant to oral Ansolysen, subcutaneous Ansolysen should be used. A suitable initial dose is 4 mg., with an increase of 5 mg. every few days until the required level is reached. Some patients are resistant to this too.

Three illustrative case histories are tabulated.

CASE 1

W.A.L., aged 50 years. Breathless in bed and on exertion, palpitations, retinal haemorrhages.

Date	Drugs	Lying	Standing		Remarks
			Arm adducted	Arm in 90° abduction	
1953					
October 2 ..	Veg. Ret.* 20 mg. and readings of blood pressure taken at 15-minute intervals	260/130	252/115		
		230/126	222/130		
		260/130	260/122		
		260/146	256/122		
		260/148	256/110		
,, 5 ..	Veg. Ret.* 40 mg. tds ..	240/120	260/140		2 ml. Theurin diuresis
,, 7 ..		230/120	190/110		
,, 10 ..	,, ,, 50 ,, ,,	210/110		190/110 (1) (2)	
,, 14 ..	,, ,, 90 ,, ,,	210/130		190/105 204/106	
,, 17 ..	,, ,, 100 ,, ,,	200/120		184/94 170/96	tightness in chest
,, 19 ..	,, ,, 100 ,, ,,	210/110		170/80 175/95	constipated
,, 21 ..	,, ,, 100 ,, ,,	200/120		160/80 160/80	
,, 24 ..	,, ,, 120 ,, ,,	210/120		165/80 166/86	diuresis
,, 26 ..	,, ,, 130 ,, ,,	200/120		175/90 200/120	
,, 28 ..	,, ,, 140 ,, ,,	200/125		165/80 165/90	
November 2 ..	,, ,, 150 ,, ,,	200/130		165/100 165/90	
,, 4 ..	,, ,, 160 ,, ,,	210/120		180/80 180/80	diarrhoea
,, 7 ..	,, ,, 170 ,, ,,	220/120		120/70 140/85	dizzy fatigue
,, 9 ..	,, ,, 160 ,, ,,	220/110		140/70 140/70	diarrhoea
,, 16 ..	,, ,, 160 ,, ,,	230/130		185/115 165/90	bowels troublesome
,, 20 ..	,, ,, 160 ,, ,,	210/130		160/85 140/80	
1954					
January 15 ..	,, ,, 160 ,, ,,	260/120		205/95	giddy, weak
,, 23 ..	Ser. 0·25 mg. tds	240/130		190/85	168¼ lb. (5'3")
February 6 ..	,,	260/125		190/85	168¼ lb.
,, 27 ..					171½ lb. Theurin 2 ml.
April 5 ..	,,	230/140		210/130	tired in morning
May 8 ..	,,	200/95		110/70	
June 6 ..	Ser. 4 tab. daily and Veg. Ret.* 70 mg. *nocte*	230/120		210/100	177½ lb.
July 24 ..	,,	180/80		190/90	Theurin 2 ml. (6 pints)
August 21 ..	,,	260/120		220/90	
,, 28 ..	,,	180/100		150/80	
September 1 ..	,,	230/120		178/90	Theurin 2 ml. (4 pints)
September 11 ..	,,				Theurin 2 ml. (5 pints)
,, 20 ..	Ser. 4 tab. daily and Ans. 4 tab. daily	200/110		146/85	
,, 25 ..	,,	210/110		190/100	
	Ans. 8 tab. daily	220/100		210/100	Diamox 1 tab. daily
November 13 ..	Ans. 12 tab. daily	220/120		160/100	Fatigue excessive
1955					
February 5 ..	Ans. 5 tab. daily	220/140		180/115	
March 26 ..	,,	240/120		190/110	176 lb.
April 13 ..	,,	230/120		170/100	178½ lb.
,, 27 ..	,,	230/140		170/120	175¼ lb.

* Vegolysen Retard given subcutaneously.

(1) Standing before lying blood-pressure taken.

(2) Standing after lying blood-pressure taken.

CASE 2

B.E.V., aged 42 years. Dizziness.

Date	Drugs	Lying	Standing			Remarks
			Arm adducted	*Arm in 90° abduction*	*Arm in 180° abduction*	
1952						
May 29 ..		210/30				Albumin and hypertensive
June 12 ..		230/134				Weight 183
„ 19 ..		224/140				Blood urea 36 mg.%
August 23 ..	Lumbodorsal sympathectomy					
December 9 ..		176/114	184/126			
1953						
February 17 ..		224/132	210/140			no albuminuria
March 11 ..		220/120	170/116			shivering
April 18 ..		206/128	190/126			looks and feels better
1954						
March 12 ..		208/138	208/140			
May 14 ..		214/142	212/146			
June 25 ..		216/144	216/146			
August 6 ..		196/124	202/128			
„ 30 ..	Ser. 2 tabs. daily	204/126	210/124			
September 22 ..	Ser. 5 „ „	192/120	168/104			
October 13 ..	Ser. 5 „ „	194/116	140/112			
„ 22 ..	Ser. 4 „ „	180/108	134/86			
	Ans. 3 „ „					
November 10 ..	Ser. 6 „ „	166/100	128/92			
	Ans.3					
„ 24 ..	Ser. 6 „ „	210/116	116/80			Giddy when standing for any length of time
	Ans.3 „ „					
December 10 ..	Ser. 5 „ „	224/126	152/114			
	Ans.2 „ „					
December 24 ..	Ser. 3 „ „	194/116	156/110			
	Ans.2 „ „					
1955						
January 21 ..	Ser. 6 „ „	192/116	132/106			
	Ans.2 „ „					
February 18 ..	Ser. 6 „ „	204/114	168/114			
	Ans.2 „ „					
June 13 ..	Ser. 6 „ „	240/130	150/110			
	Ans.2 „ „					
July 18 ..	Ser. 2 „ „	185/115	145/100	140/90	125/75	
..	Ans.2 „ „					
August 25 ..	Ser. 4 „ „	210/120	150/100	150/90	150/90	Had stress
	Ans.4 „ „					
September 13 ..	Ser. 4 „ „	160/100		50/40		
	Ans.5 „ „					
September 16 ..	Ans.4 „ „	190/110		110/75		
October 7 ..	Ans.4 „ „	190/130		140/105		
November 28 ..	Ans.4½ „ „	208/130		170/102		
1956						
January 25 ..	Ans.4½ „ „	176/120		114/70		

Serpasil tablets—·25 mg.
Ansolysen tablets—40 mg.

CASE 3

B.A.I. Age 65 years. Chronic Nephritis with Hypertension. Original B.P., 8 October 1953. 220/160

Date	Drugs	Lying	Standing	Remarks
			Arm in 90° abduction	
1953				
October 8 ..	Veg. Ret.	220/160		
„ 26 ..	„ 90 mg. tds.	117/115	180/150	Vomited
„ 28 ..	„ 90 „ „	190/130	165/115	Blood urea 81 mg. %
„ 30 ..	„ 80 „ „	180/130	180/126	Work not a hardship
November 2 ..	„ 90 „ „	154/120	120/86	
„ 9 ..	„ 90 „ „	175/125	144/110	Muzzy head
„ 16 ..	„ 80 „ „	170/118	120/95	No energy, diarrhoea, nausea.
„ 19 ..	„ 60 „ „	200/130	180/120	Feeling well
„ 25 ..	„ 60 „ „	180/140	126/95	Alternating constipation and diarrhoea.

Date	Drugs	Lying	Standing	Remarks
			Arm in 90° abduction	
December 21	.. „ 40 „ „	204/140	180/130	
„ 28	.. „ 60 „ „	200/140	140/110	
1954				
January 4	.. „ 50 „ „	180/120	158/115	
„ 11	.. „ 50 „ „	185/130	145/96	
„ 18	.. „ 50 „ „	200/120	160/110	
„ 25	.. Ser. 3 tab. bd.	215/120	175/120	
February 1	.. Veg. Ret. 50 mg. bd. and Ser. 3 tab. bd.	200/120	140/100	Constricting chest pain
„ 2	.. Veg. Ret. 50 mg. bd. and Ser. 3 tab. daily	230/130	155/105	
March 5	.. „	210/120	175/115	Cholecystitis
„ 22	.. „	195/100	135/100	Diarrhoea.
April 22	.. „	210/130	160/100	
September 21	.. „	210/140	170/125	From this date onwards touring in Europe
„ 28	.. Ans. 4 tab. daily	210/140	200/140	
	.. Ser. 2 „ „			
November 2	.. Ans. 4 „ „	190/140	190/130	
	Ser. 2 „ „			
November 16	.. Ans. 4 „ „	230/150	170/130	
	Ser. 1 „ „			
November 22	.. Ans. 4 „ „	210/140	190/130	
December 6	.. Ans. 4 „ „	210/160	190/140	
December 28	.. Ans. 4 „ „	210/150	190/150	
1955				
January 4	.. Off Ansolysen	240/160	260/160	
„ 11	.. „ „	190/130	150/115	
„ 18	.. Ans. 4 tab. daily	160/120	140/100	
February 1	.. dosage unreliable	190/120	210/140	
„ 23	.. „ „	220/140	210/130	Vomiting, no appetite.

Serpasil tablets — ·25 mg.
Ansolysen tablets — 40 mg.

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THE MANAGEMENT OF ALCOHOLISM*

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It is generally accepted that alcoholism is on the increase; and so, therefore, is interest in and research into the problem. It is not easy to estimate the number of alcoholics in any given population. Jellinek has developed a formula whereby he computes the number of alcoholics in America to be about 1% of the population. Various estimates of the figure for South Africa have been made; it seems likely that the number is in the region of 90,000. The significant figure which has emerged from a study of the statistics, however, is not so much the number of alcoholics, but the number of other people whose lives are affected. The effect on the family—wife, children, and so on—is obvious. In industry the effect of alcoholism has been of far-reaching consequence, and it has now been realized that it is *profitable* to treat the alcoholic rather than to discharge him and train another man in his place. This realization has had its impact on the Rand, where the gold-mining industry and the Johannesburg municipality have well-established schemes for the treatment of the alcoholic and are carrying out research into his problems, with consequent benefit both to the alcoholic and to the general policy of conservation of man-power.

* A paper presented at the South African Medical Congress, Pretoria, October 1955.

THE ALCOHOLIC A MEDICAL PROBLEM

This is an important change in attitude, that the alcoholic should be considered a sick man and receive treatment as such, rather than as a weak, immoral or wilfully badly-behaved person, who should be treated with contempt. The circumstance which is largely responsible for this change in approach is the recent realization that there is a physical factor in the etiology of alcoholism. It appears that there develops in certain people a central idiosyncracy to the substance alcohol, which results in compulsive drinking. This mechanism is triggered off by alcohol, sometimes by a very small amount of it, (as, for example, in one of our cases, the brandy in the Christmas pudding), and the need for alcohol is then truly compulsive and quite outside the control of the patient. The alcohol in the body appears to create a craving which can only be satisfied by the substance which brought it about, as, of course, with other addictions. This physical need can naturally not be dealt with by persuasion or by threats. Medical and nursing care is essential during this phase, so that it can seldom be managed at home.

The cause of this change in the physical reaction to alcohol is not known. It has been postulated that there may be some intracranial lesion; the lowered tolerance to alcohol after head injuries is well known. But it is perhaps more likely that certain cells in the liver are destroyed, or in some way altered, so that they can no longer deal with alcohol as is done in the normal liver, that is, by breaking it down into acetic acid, water and so on, with the result that toxic acetaldehydes form and accumulate. It is these toxic substances which initiate and perpetuate the cycle of compulsive drinking. Typical indications that such a cycle has begun are a change in the drinking pattern; a small amount of alcohol has a far greater effect than previously and, specifically, the need for a *regmaker* arises.

Underlying these physical factors are the psychological needs for alcohol. Alcohol has the effect of minimizing self-criticism and easing tensions aroused by frustration, resentment or anxiety. As with other neuroses, the fundamental pattern is one of insecurity, and the feelings of guilt, unworthiness or rejection which are aroused by the attitude of society towards the alcoholic still further accentuate these tensions and so perpetuate the psychological need for reliance on alcohol. It is a disturbing thought that the attitude of society actually contributes towards the very condition it seeks to abolish by its condemnation.

TREATMENT OF THE ACUTE ATTACK

Treatment of the acute physical disturbance, as mentioned, is best managed in a nursing home. Rest, adequate nutrition and suitable sedation are the chief aims.

During a drinking bout, sleeping and eating are severely affected and it is often only because he feels so ill that the alcoholic can be brought to the realization that he does indeed require hospitalization. Massive doses of vitamins, particularly the B complex and C are given by mouth and by injection, as well as large amounts of fluids. We have not had such dramatic success with intravenous vitamin therapy as has been described elsewhere, but this obviously has its value. We prefer to give alcohol *ad lib.* for the first 24 hours and then to taper off over the next 2 days, for it appears to be a terrifying experience to the alcoholic to be deprived of alcohol until he feels that his craving is being blunted by some other means. We have found that Tolseram is of value in this respect but, because of the readiness with which the alcoholic becomes addicted to any form of sedation, this should not be continued for more than a few days. At Northlea beneficial results have followed the use of Hydergine and Bellafoline. Northlea is an institution for alcoholics maintained in Johannesburg by the Rand Aid Association. If there is evidence of severe damage to the liver, a high-protein, fat-free diet, with perhaps some protective substance such as methionine or Methischol, is advisable.

In the matter of sedation, paraldehyde is probably the drug of choice, though it has its dangers. Unless kept from contact with the atmosphere, oxidation tends to take place and aldehydes form, which may have a toxic effect. Hyoscine and the barbiturates are generally contraindicated.

In view of the possibility of epileptiform seizures, Epanutin is a useful routine for the first few days.

The development of delirium tremens is a distressing and often dangerous complication. Here Largactil by intramuscular injection has been proved to be of considerable value, often bringing about a deep sleep, from which the patient wakes in his right mind, as it were, even when large doses of paraldehyde or other narcotics have previously failed to touch him. Largactil, however, is of little value while the patient is taking much alcohol; in fact, it has a deleterious effect.

The 'drying-out' period is particularly uncomfortable and a sympathetic attitude on the part of the doctor will do much to form a basis for a good rapport when the more difficult stage of the treatment of the chronic phase is commenced.

MANAGEMENT OF THE CHRONIC PHASE: REHABILITATION

Treatment during the chronic phase must be continued for a long period, after the patient has returned to his home and his work, and is of necessity then on an out-patient basis. Individual psychotherapy is often essential, but group psychotherapy, such as is carried out at 'The Gables' (a Toc H organization in Johannesburg where out-patient facilities are available for the treatment of alcoholism) and Northlea, is of even greater value. It is of the utmost benefit to the alcoholic to feel that he is an accepted member of a group. Feeling, as he does, rejected by society, his awareness of his own inadequacies increases tenfold and so, consequently, does his need for reliance on alcohol; so that acceptance by a group comes as a tremendous relief to him and gives him a solid foundation on which to develop an understanding and the eventual management of his personality difficulties. The success of Alcoholics Anonymous is a good indication of the value of this aspect.

In the management of the chronic phase, the *attitude* of the therapist is again of paramount importance. It is essential to minimize, as far as possible, any of the moral significance which society places on excessive drinking.

In our culture, as indeed in many others, the use of alcohol has become almost a yardstick of manhood. The adolescent indicates, by indulging in a few beers, that he has now become a man. It is a matter for congratulation to be able to 'carry one's liquor like a man'. In certain literature, too, the 'hard-boiled' criminal investigator creates admiration by the way he is able to 'knock back' his whisky neat. It is for this reason that a man is most unwilling to make the admission that he is unable to manage his alcohol. It appears to him to be a confession of weakness, a slur on his manhood. It is of the utmost importance to make the point early in therapy that this difficulty is the result of a physical change occurring in a certain type of physical constitution. It is pointed out that difficulty with alcohol occurs particularly in a group of people who tend to have certain physical characteristics in common. For instance, 80% of alcoholics in South Africa have blue eyes (the average for the whole population is 49%). The majority too, have skins which are sensitive to the sun and burn easily. Most of them do not like sweet foods, puddings and so on; they prefer salty foods. Finally, the men, particularly, tell us that, even when they started drinking, they could take more than the average, their tolerance for alcohol being high; then, suddenly, after 5 or 10 or 15 years, their tolerance dropped and a small amount of alcohol had a large effect; the pattern of their drinking changed, an indication that some *change* had taken place in their physical reaction to alcohol.

These points, made in group, nearly always strike some chord amongst its members and the process of counteracting the effects of the 'morality' attitude to alcoholism has begun. Because the alcoholic is so sensitive to the emotional climate in which he lives, it is necessary to enlist the support and cooperation of those about him, and it is most helpful if wives or parents can attend the group discussions with the patients. Often a hostile or resentful wife can be turned into a useful ally, once she begins to understand more about the reasons for her husband's drinking.

Emphasis is at first laid on the changes in metabolism which bring about the sensitivity to alcohol. The fact that these changes are irrevocable and irreversible means, of course, that the alcoholic will always be sensitive to alcohol and that he will never be able to drink socially again. But this is not laboured in early discussions, because 'never' is a long time and it is by no means easy for the alcoholic to contemplate never drinking again for the rest of his life. He says he won't, but he doesn't really mean it. In fact, he has no right to say so; he does not fully realize all the implications. He has to learn for himself. As he is learning more about the problem, by the simple, painful process of experience, with the help of support, explanation and reassurance, he learns from his 'slips', 'skids' or bouts of drinking that in fact he cannot drink. It may take many bitter experiences before this simple fact is genuinely accepted but, once it is, he is well on the way to rehabilitation.

Antabus

It is never easy, however, to do without alcohol, if its use has been a necessary part of one's life-long pattern of reaction. It has been mentioned that alcohol has the effect of easing tension brought about by stress and, once this behaviour pattern of reliance on alcohol in time of stress has become established, there is a strong resistance to any interference with that pattern, no matter how clearly it is recognized that it is an unsatisfactory one. For this reason we have recently employed Antabus (tetra-ethyl thiuram disulphide) for its protective value in the treatment of alcoholism. Taking alcohol while one is on antabus cause the development of certain uncomfortable symptoms, which make it unpalatable to take enough alcohol to trigger off the mechanism of compulsive drinking. In advising the use of antabus, its *protective* value should be stressed and the parallel is drawn of the man living in a malarial area who protects himself from malaria by the use of quinine, or the diabetic who protects himself by the use of insulin; so the man who has had difficulty with alcohol protects himself against further difficulty in that respect with the help of antabus.

The primary value of antabus is obvious, to guard against further bouts of drinking and to halt the otherwise inevitable progress of the disease. The secondary effect, however, is even more valuable. On antabus, the alcoholic feels 'safe' and, what is more, his wife feels safe too and so does his employer and the other people about him. It is difficult for even the most sympathetic and well-meaning wife to avoid something of a suspicious or even a nagging attitude towards her husband in regard to alcoholism, and it is this very attitude which so often drives a man to have a drink and so start off the whole cycle of compulsive drinking. On antabus, the whole domestic climate is more favourable and the patient is free to give his full attention, in a clear field uncomplicated by anxieties about alcohol, to whatever psychological, social or domestic difficulties have been encumbering his life.

The usual dose of antabus is one tablet daily, taken morning or evening, whichever is more convenient. It is not always sufficient to rely on the patient to take the dose by himself; it is sometimes preferable to arrange for the wife to give it, and it may be wiser to have it crushed, in suspension in water, it has been known for the patient to conceal the tablet under his tongue and spit it out later. It is of the utmost importance, in any case, for the administration of antabus to be as unemotional and matter-of-fact as possible. There is inevitably some resistance to the idea of taking it, and threats, insistence, or making an issue of it, will increase that resistance to the point of blank refusal.

The contra-indications to the use of antabus are such conditions as cardiac disease, severe hypertension, renal damage and the like; but it should be borne in mind that possible danger from antabus may be a lesser evil than the certain danger of further alcohol. In the first few weeks of taking antabus there may be some side-effects, such as mild urticaria, frequency of micturition, or a generalized feeling of dullness or lethargy, but these effects are only temporary and eventually wear off completely, particularly if the dose of antabus is cut down for a few days. Impotence is sometimes complained of, also temporarily. Increased libido has also been reported. We have occasionally seen a severe neuritis, which may

have been due to antabus, but in any event cleared up eventually with massive doses of vitamin B_{12}. A rare complication is the development of a confusional state not unlike delirium tremens.

Antabus should not be given until 48 hours after the last drink, for fear of precipitating the antabus-alcohol reaction. It is rather slowly absorbed into the system and even more slowly excreted, so that one may take antabus for 3 months, then stop, and 4 days later have a drink and still have a reaction. This is fortunate protection in the case of a sudden impulse to stop antabus and take alcohol.

It is a necessary part of the regime for the patient to undergo an 'antabus test'. In this the patient, who has been on antabus for at least a week, is given a small amount (usually 4 drams) of alcohol, in order to produce the antabus reaction. This consists of flushing of the face, tachycardia and dyspnoea, all compensatory effects which follow the sudden drop in blood pressure brought about by the aldehydes produced during the reaction. Usually 2 such tests are given, with a fortnight's interval; the aim, apart from the obvious 'safety first' reason, is to demonstrate what happens when one takes alcohol on antabus and inculcate awareness of the fact that there is, with antabus, a protective mechanism against alcohol. In short, where the original mechanism was, in effect, '"alcohol" means "more alcohol"', it becomes '"alcohol" means "stop"'. It is unnecessary, even unwise, to produce a severe reaction with a test. When antabus was first used the aim was, apparently, to produce a very severe reaction indeed, in an attempt to frighten the patient out of drinking. This was found not to work; all that happened was that the patient was frightened out of using antabus. The point is that antabus should be looked on as a *friend*, not an enemy, as a means of protection from alcohol while one is learning to manage the other circumstances of one's life.

The protest has often been raised that it is a confession of weakness to use antabus—,Surely will-power is good enough?' The answer, of course, is that 'will-power' can play no possible part once the mechanism of compulsive drinking has been set in motion; it is completely outside control. Even against the first drink, it is of little help, for will-power simply does not work in reverse; the more one tries to force oneself *not* to do a thing, the stronger the urge to do it becomes. It is much less productive of tension and anxiety, in our view, to recognize one's problem, take appropriate protective action, and then forget about it.

Rehabilitation

It is, of course, not enough just to remove alcohol from a man's life and hope for the best. Without his crutch, he feels unsafe, insecure and exposed to hostile forces. He becomes tense, anxious, restless and irritable, and it is during this phase more than ever that he is in need of the support of the people about him, as well as the reassurance and guidance of psychotherapy, both individual and group. Alcoholics Anonymous can be of great assistance at this time and, in order to combat the habit factor, which is by no means inconsiderable, some alteration in the pattern of living will be necessary. Some men have said that, if they have a couple of cups of tea as soon as they get home from work, it breaks the urge for a sundowner. A new hobby, or a new circle of friends, may help considerably. Even such a small dodge as drinking iced ginger ale out of a champagne glass helps him not to feel 'out of it' at a party.

CONCLUSION

These comments and the general approach outlined above are based on work carried out by 'The Gables' and Northlea. The inadequacy of the facilities available is woefully apparent. We are only on the fringe of a proper understanding of the problem, let alone its management. Nevertheless, even in the light of our present knowledge, much can be done to help the alcoholic. He is seldom a sought-after patient; he causes much trouble and heartbreak to those who try to help him; he is often ungrateful and usually 'broke'. The problem is, however, a tragic and a devastating one; the approach to it must of necessity be many-sided—physical, psychological, social and religious; but it is surely the enlightened, understanding and sympathetic medical practitioner who is in a position to be of the greatest help to the patient and to his family.

If one has been able to contribute towards the achievement of a year's sobriety in an alcoholic, one has done much. As implied in the title of this paper, the aim must be not the *cure* of alcoholism so much as the *management* of alcoholism.

DR. J. S. DU TOIT CELEBRATES HIS 70TH BIRTHDAY

Dr. J. S. du Toit, M.D., F.R.C.S. (Edin.), of Cape Town, President Elect of the Medical Association of South Africa, celebrated his 70th birthday on 5 March 1956, when Dr. and Mrs. du Toit held a reception at Kelvin Grove Club, Newlands, Cape. The reception was honoured by the presence of Their Excellencies the Governor General and Mrs. Jansen and there were 300 other guests, including Dr. Colin Steyn and other members of the family, several cabinet ministers, and many medical friends including Dr. A. W. S. Sichel, Chairman of Federal Council of the Medical Association and Mrs. Sichel.

The birthday toast was proposed by the Rev. Dr. A. J. van der Merwe, Moderator of the Dutch Reformed Church in the Cape, and Dr. du Toit replied.

Dr. du Toit has been a member of the Medical Association for 44 years, was President of the Cape Western Branch in 1929, and has been Honorary Treasurer of the Association for 32 years. For many years he was joint senior ophthalmic surgeon of Groote Schuur Hospital, Cape Town, and is still in private practice as a specialist ophthalmologist. He is a well-known figure in other walks of life, being a member of the Council of the University of Cape Town (30 years), elder (20 years) and chairman of the Finance Committee, Groote Kerk, Cape Town, director of the Nasionale Pers Beperk (23 years), and a farmer.

CONSERVATION OF MAN POWER: ALCOHOLISM IN THE INDUSTRIAL POPULATION

A CHALLENGE TO THE MEDICAL PROFESSION*

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'We can describe the rapid expansion of Industry in South Africa as phenomenal particularly when we consider the many environmental difficulties with which our young industries have to contend. Many of our industries still require assistance and advice and much practical help in dealing with the numerous human problems which crop up daily. Men and women have been forced to adapt themselves to exacting new conditions in a short time, and this has often led to mental conflict which can, however, be minimized by sympathetic treatment.

'The problem of alcoholism arises in thousands of homes, and thus also in Industry, which has developed essentially to serve our people and increase their well-being.

Dr. H. J. van Eck[1]
Chairman, Industrial Development Corporation of South Africa.

Industry in South Africa has seen the writing on the wall, and has taken heed of the warning[1] that alcoholism is encroaching on its most valuable asset, the industrial population. Nevertheless, there still exists much apathy and misunderstanding on the part of the medical profession in this region. Industry has thrown out a challenge to the medical profession, and the ball has been tossed at the feet of the general practitioners, who as front-rankers have the option of either burying their heads in the sand like the proverbial ostrich and avoiding the responsibility of coming to grips with this chronic, relapsing, at-the-moment incurable, and most frustrating disease, or tackling the problem and applying the knowledge and skill with which as a profession they are adequately equipped.

It has been argued that the individual doctor is unable to deal with the alcoholic. This is far from correct for, once the doctor is intellectually convinced that alcoholism is a disease, the battle is more than half won, and alcoholism takes its place as a medical entity with the other recognized diseases, and is treated as such.

Moore[2] aptly censures the doctor. He says: 'Too often the reproaches of the patient's family and friends (and employer)[3] are repeated by his doctor, who lends the weight of his authoritative position to threaten the patient with dire sequelae, both physical and mental, of his continued intemperance. If one is to treat alcoholism successfully, it is necessary to feel as well as believe that the patient is ill. To extend sympathy and understanding to an alcoholic, at first requires a conscious effort. The practitioner who bristles with righteous indignation and upbraids and exhorts his patient does as much harm as his more urbane colleague who evades the issue and tells his patient to "ease up", "cut out spirits", "stick to beer", "nothing before six". Addiction is a chronic illness and treatment must be on a long-term basis.'

The general practitioner in his own practice can do much to alleviate the lot of the alcoholic in various ways, such as appreciating and understanding the intimate problems that arise in the environment of the alcoholic. To the alcoholic these problems, however remote they may appear to others, are very real and, in addition, the guilt that he is made to feel for his condition only accentuates his problems and makes them still more difficult to cope with. However, the field of the lone practitioner, owing to his lack of resources, must perforce be limited, and this is where the group or unit plays its part[4] because, for the very reason that it is composed of a number of people all working towards the same end, it must have a wider scope of operation. An example of such a group is the Conservation of Man Power Unit, which is concerned with the problem of alcoholism.

THE CONSERVATION OF MAN POWER UNIT

This unit has approached the problem of alcoholism from the industrial point of view; the foundation on which the approach is built is essentially good Labour and Management relationship in active cooperation[5]—a fundamental concept in human relationship[6] as applied to Industry. In this approach, both Labour and Management collaborate in the 'treatment' of the patient—Management by giving the worker the necessary amount of time-off daily to attend the rehabilitation unit, by encouraging him to accept therapy, and by taking an interest in him and his problems.

As the unit is concerned with the worker in Industry, and is thus industrially biased, it follows that the first consideration is to 'keep the worker on the job' in useful employment as far as possible. This keeps the worker in contact with his fellow workers and in his own 'group'—an essential aspect of therapy. Furthermore, the keeping of a worker employed prevents him and his dependants from becoming a burden both to the State and to themselves, and tends to turn them from a liability to an asset—an important factor in the maintenance of the worker's morale and self-respect.

Labour, in the form of the Staff Association or Trade Union, should take an active interest in their fellow worker or fellow member, by ensuring that he attends daily to receive his therapy, and that the difficulties encountered in the work-environment are ironed out where possible. Let us suppose, for example, that the worker is a commercial traveller; it may be necessary for a time to keep him near his headquarters rather than further afield. With a transport worker—say a bus driver or conductor—it may be advisable at times to arrange a change of shift until he is able to cope with normal duties. It is imperative, also, for these Labour organizations to take a keen and real interest in the welfare of the worker in his domestic environment.

* A paper presented at the South African Medical Congress, Pretoria, October 1955.

Finally it is necessary for both Labour and Management to maintain good relationship and industrial harmony: such a symbiosis is essential in the interest of the individual worker, as well as in Industry as a whole.

Although medical therapy plays an important part in the concept, yet by itself it is inadequate. In order to be effective, treatment at the moment falls into three divisions, viz. (1) the medical division, (2) the psychological division, with its sub-division, 'welfare and social relations', and (3) the financial counselling division.

THE MEDICAL DIVISION

Alcoholism is a disease, a disease as real and as badly in need of treatment and understanding as any purely physical illness. This is an aspect that is constantly stressed during therapy, since the unit is concerned mainly with the physical rather than the moral aspect of drinking.

The alcohol-addicted individual very often does not seek treatment until his physical and mental conditions become a source of extreme worry to him and his intimates. Occasionally he may try to do something about his drinking before he becomes completely incapacitated but usually it is only when malnutrition and other conditions brought about by the excessive taking of alcohol lay him low that a general practitioner is hastily summoned to deal with the patient in an acute phase of alcoholism. At this stage the best that can be expected is to try to get the patient better physically; when his health is sufficiently improved he is ready to receive routine therapy by the unit.

At the first interview, at which a complete examination should be made, the general practitioner explains to the patient that is is in his own interests, and part and parcel of his treatment, to obtain the assistance and cooperation of his employer, if at all possible. It is also suggested that he get the cooperation of his Trade Union or Staff Association, should he belong to one or the other. The approach to these bodies is made by the worker himself. This at times is not so simple as it appears, for as yet not all the employers or Labour organizations in Industry are sympathetic or understand the problem. If a worker sometimes feels diffident about making the approach to the employer, then the doctor volunteers, with the patient's permission, to step into the breach, and acts as liaison in the matter.

After the examination is over, and a complete case-history has been taken, the practitioner can assess the amount of organic damage that his patient has suffered. Immediate medical treatment is instituted in an effort to repair the affected tissues. At the same time treatment is started that makes drinking an impossibility without extremely unpleasant and sometimes dangerous results to the patient, by the use of tetra-ethyl thiuram disulphide (Disulfiram, Cronetal I.C.I.). The patient is constantly warned of the dangers of drinking while under therapy, and to help him to resist the influence of well-meaning, but often derisive, friends he is supplied with an instruction and identity card giving warning that alcohol is dangerous to the patient under treatment.

The patient comes in daily for therapy under the supervision of the general practitioner. He is given his treatment by a qualified and fully-trained nurse, chosen especially for her sympathy and understanding of the problems confronting the alcoholic. This daily treatment serves a manifold purpose. For one thing the patient takes his Disulfiram under supervision. For another, daily contact enables the personnel of the unit to assess the progress of a patient, and makes it easier for the patient to approach the members of the unit should any problems arise, or should he at any stage require advice. The patient is also made to feel that he is welcome and wanted. This is an attempt at instilling the group theme, [7, 10] which is a necessary part of therapy.

In order to enable patients to come in daily, the rooms of the unit are open from 8.30 a.m. to 4.30 p.m. on weekdays, and 8.30 a.m. to 12.30 p.m. on Saturdays, with special arrangements for Sundays and public holidays.

Patients are encouraged to make a daily appointment suitable to themselves, and the unit then insists that the patient keeps to the appointment. This helps to prevent the waiting room from clogging up, and also assists the unit personnel by making them aware at once of missed appointments, thus enabling them to lose no time in contacting the patient and reminding him to to come in for treatment.

Such daily attendance is carried out for about 2 years or more, depending on various factors, and reports of other divisions of the unit. At certain times patients are less cooperative than at other times, and on these occasions the divisions of the unit cooperate to their fullest extent to contact the patient and try to bring him back into the fold for treatment. Here the cooperation of Management helps enormously because a little encouragement from the employer can often work wonders for a patient who is hovering on the brink of discontinuing treatment. Also, once again, the argument that alcoholism must be treated daily in the same way as the diabetic requires his daily injection of insulin, or the individual suffering from pernicious anaemia has injections throughout his life—assists the patient to review his case in a new light.

THE PSYCHOLOGICAL DIVISION

After the patient has commenced medical treatment, he is interviewed by the psychologist attached to the unit. The psychologist considers carefully the problems of the patient and their relation to alcoholism, and helps the patient to see his difficulties in a new light, and to cope with them and learn to live with them. The psychologist also encourages the patient to find and develop new hobbies in order to occupy and enjoy the time that he would normally use for drinking.

An important aspect of the psychological service is routine domiciliary visiting. These visits enable the psychologist to see the patient in his true normal home environment. One domiciliary visit often does more than numbers of room visits to make the psychologist aware of what domestic problems the patient has to face. In addition, the very act of unloading his troubles into a sympathetic ear, and receiving trained and unbiased advice, will often give the patient the little extra fillip he needs to help him in his treatment.

Closely bound up with the work of the psychologist, is that of the social relations officers—the welfare section. Many of the patients in the care of the unit cannot be reached by telephone, and it therefore becomes necessary to pay home visits to patients who have not attended the rooms on any particular day. To make these visits at home or to contact the patient at work, is one of the aspects of the work of the social relations officers.

The social relations officers are thoroughly familiar with the whole programme of the unit, and can discuss the various problems that arise in the course of treatment. They are chosen for their tact and understanding in their approach to their fellow men, for they must be able to judge in which way to approach each individual so as to obtain his maximum cooperation. The social relations officers, by regular domiciliary visits, also establish a close relationship with the patient, and in this way act as an extension of the psychological division. They also act as public relations officers whose duties are to be in touch with such organizations as Alcoholics Anonymous, about whose sterling work enough cannot be said. Wherever possible, we advocate a close association between patients and Alcoholics Anonymous, whom we have found most cooperative. In addition, the public relations officer interviews employers, Trade Unions and Staff Organizations (with the patient's permission) whenever this may be necessary, and may often act on behalf of the doctor as liaison.

Regular weekly conferences between the unit doctor, the sister-in-charge of the unit, the psychologist and the social relations officers, keep the various personnel of the unit in close touch with one another, and enables any problems that may arise in the course of treatment to be threshed out, and future policy decided on.

FINANCIAL COUNSELLING DIVISION

A basic problem to which many alcoholics confess, is that of financial difficulty—a difficulty which is becoming more frequent these days, owing to the high cost of living. Individuals, particularly those on fixed salaries, often find themselves unable to meet their obligations, and the chaotic state of finance brought about by indulgence in alcohol causes still more tension and puts further obstacles in the way of treatment.

To meet this difficulty, there is an 'Economic counselling division' attached to the unit. It does not lend money nor does it undertake to pay off the debts of its clients. It does, however, arrange its clients' financial affairs in such a way that the surplus salary, after payment of all essentials, such as rent, food, clothing, medical and travelling expenses, is distributed *pro rata* among the remaining creditors.

It contacts creditors and arranges for each creditor to accept a proportionate monthly share of the balance available for distribution. It is found necessary at times to approach hire-purchase creditors with a request for a reduction in the monthly hire-purchase payments. Firms are usually sympathetic and cooperative when they realize that an honest endeavour is being made to pay, and that the customer is not merely trying to dodge his commitments.

In extreme cases the debtor finds that his liabilities are so heavy that practically no surplus is left for creditors. An Administration Order is then applied for and a hearing arranged before a Magistrate. An attorney appears for the debtor. He explains his client's financial position to the Magistrate, who then makes an order for a monthly payment equal to the surplus available. As long as the amount is paid regularly into Court, creditors cannot take further action and thus aggravate the position of the debtor.

These arrangements provide satisfactory remedies for temporary financial difficulties of a domestic nature. The patient is not spoonfed, but is helped over his difficulties and shown how the momentum of this help can carry him along the rails to a self-sufficient, rehabilitated and perhaps alcohol-free future.

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DAARSTELLING VAN 'N PROVINSIALE HOSPITAAL*

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In 'n snel ontwikkelende land soos Suid-Afrika en veral sekere dele daarvan, met sy vinnig toenemende stedelike bevolkings, blank sowel as nie-blank, is die aanvraag na nuwe hospitale sowel as die uitbreiding van bestaande inrigtings 'n kwessie wat daagliks die ernstige aandag van Hospitaaldepartemente van die Provinsiale Administrasies verg.

Druk van die kant van die plaaslike publiek en sy verteenwoordigers kan soms baie sterk wees. Omdat sodanige publiek egter uit die aard van die saak net bekend is met, of geïnteresseerd is in die behoeftes van die betrokke omgewing, is dit nodig om 'n breë uitkyk te

* 'n Referaat gelewer tydens die Suid-Afrikaanse Mediese Kongres, Pretoria, Oktober 1955.

hou, en gedurig die beplanning van hospitalisasie vir die hele Provinsie, met inbegrip van private hospitale, in oënskou te neem.

Wat is dan die belangrikste faktore en die aspekte van iedere individuele aangeleentheid wat die betrokke amptenare in aanmerking moet neem? Hulle kan min of meer as volg saamgevat word:

1. *Is 'n hospitaal daar nodig?*

Die noodsaaklikheid al dan nie van so 'n hospitaal moet vasgestel word eerdat goedkeuring in beginsel vir die oprigting daarvan van die betrokke Uitvoerende Komitee verkry kan word. En om te bepaal of 'n hospitaal in so 'n omgewing wel nodig en wenslik is, kan die volgende faktore as belangrik beskou word:

(*a*) *Bevolkingsyfer* van die gebied wat bedien moet word. Is hierdie syfer konstant of aan die toe- of afneem, en teen welke tempo? Wat was die groei in die verlede en wat sal dit waarskynlik in die toekoms wees?. Die oorsake van groei moet ontleed word, bv. myne, industrialisasie, landbou, toeristebedryf, uitbreiding van opvoedingsfasiliteite en dies meer. Beide die drome van die optimis en die vrese van die pessimis moet hierby aangehoor en die waarde daarvan bepaal word.

(*b*) *Hoedanige ander hospitaalgeriewe* is daar binne redelike afstand? Is dit moontlik om in die behoeftes van die betrokke omgewing te voorsien deur bestaande hospitale uit te brei, of is dit onwenslik en onmoontlik omdat hulle (i) reeds te ouderwets is, (ii) die betrokke terrein te klein of die hospitale reeds te groot is, of (iii) weens die rigting van uitbreiding nie sentraal of bereikbaar genoeg is nie. Weens die moderne neiging om sekere dienste te sentraliseer, moet goed nagedink word alvorens 'n nuwe hospitaal te bou i.p.v. 'n bestaande een uit te brei.

(*c*) *Beskikbaarheid van 'n geskikte terrein.* (i) Sodanige terrein moet groot genoeg wees en hier kan gesê word dat 10 morg as 'n minimum beskou kan word vir 'n moderne algemene hospitaal, veral as rekening gehou word met toekomstige uitbreiding, wat feitlik elke hospitaal na 10-20 jaar nodig het. Hierdie faktor maak die daarstelling van nuwe hospitale in sekere dele van die Rand nou reeds byna onmoontlik. (ii) Elektrisiteit, water en sanitasie moet in voldoende hoeveelhede beskikbaar wees. Die hoeveelheid water benodig sal o.a. daarvan afhang of 'n diens soos 'n wassery voorsien word. En tensy daar verbinding is met 'n munisipale sanitêre skema sal 'n duur plaaslike installasie 'n noodsaaklikheid wees. (iii) Transportfasiliteite moet aanwesig wees, d.w.s. paaie, spoorweë, busse of ander vorms van publieke transport. Hierdie is 'n absolute *sine qua non* vir enige hospitaal, en wel ten opsigte van personeel, pasiënte, besoekers sowel as goedere. 'n Hospitaal *moet* maklik bereikbaar wees vir die wat gebruik daarvan maak. (iv) Ander faktore wat ook in mindere of meerdere mate van belang is, is bv. afwesigheid van geraas, rook en reuke; beskikbaarheid van wind en sonlig en moontlik 'n aantreklike uitsig.

(*d*) *Aantreklikheid vir en beskikbaarheid van personeel.* Tensy 'n hospitaal na genoeg aan die gewone dorpsgeriewe geleë is, of publieke transportfasiliteite baie gerieflik is, sal hy altyd moeilikheid hê om verpleegsterspersoneel te kry. Ondervinding het geleer dat in afgeleë dorpe hospitale slegs aan die gang gehou word omdat daar plaaslik getroude verpleegsters is wat beskikbaar en gewillig is om die diens te lewer. Dit geld ook vir ander personeel soos röntgenograwe, fisioterapeute, arbeidsterapeute en aptekers wat met weinige uitsonderings die stede en groter dorpe verkies. Spesialiste is byna uitsluitlik in die stede beskikbaar en derhalwe behoort hospitale waar sodanige dienste beoog word sover moontlik in of in die onmiddellike nabyheid van stede aangebring te word. Die moeilikheid om bv. Nelspruit-sanatorium vir tuberkulose en Warmbad-hospitaal vir nie-akute, hoofsaaklik rumatiese, gevalle van mediese personeel te voorsien, is welbekend. Daar was 'n tyd slegs enkele jare gelede toe die stigting van die hoogs slegs enkele jare gelede toe die stigting van die so hoog nodige kleiner hospitale op die platteland nie oorweeg kon word nie weens gebrek aan verpleegsterspersoneel. Wat dit betref, het die posisie nou aansienlik verbeter.

2. *Hoe groot en van watter tipe moet die hospitaal wees?*

Gestel daar is finaal besluit dat 'n seker omgewing met 'n bepaalde bevolkingsyfer van hospitaalgeriewe voorsien moet word, en dat dit 'n nuwe diens moet wees. Hoeveel beddens en watter soort diens moet voorsien word? Hoewel dit soms nodig mag wees om kleiner inrigtings te bou, kan daar aangeneem word dat 'n algemene hospitaal met minder as sê 40 bedde nie 'n ekonomiese eenheid sal wees nie. So ook word daar taamlik algemeen aangeneem dat meer as 800 bedde onwenslik is—omdat dit dan onhanteerbaar en onpersoonlik word. Wye afwykings hiervan is egter soms onvermydelik.

(*a*) *Formules.* Daar is verskillende *formules* waarvolgens die aantal bedde benodig bepaal kan word. Die Duke Endowment-formule het 'n aantal jare gelede die volgende syfers vir stedelike gebiede in Amerika voorgestel:

5 bedde per 1,000 vir algemene bedde;
0·5 bedde per 1,000 vir kinders;
0·45 bedde per 1,000 vir kraamgevalle.

In plattelandse gebiede waar byna uitsluitlik algemene praktisynswerk gedoen word kan hierdie getalle waarskynlik aansienlik laer wees.

Vir Transvaal met sy bevolking wat gemeng en hoofsaaklik stedelik is, kan die volgende syfers moontlik as redelik beskou word:

4 bedde per 1,000 vir algemene bedde;
0·5 bedde per 1,000 vir kinders;
1 bed per 1,000 vir kraamgevalle.

Hierby moet ten minste 10% vir spesialistiese dienste gevoeg word.

Wat die chroniese siekes betref, kan 2 per 1,000 as redelik beskou word hoewel dit grootliks sal afhang van hoe wyd die uitdrukking ‚siekes' geïnterpreteer word en in hoever sosiale probleme in- of uitgesluit word. As die rehabilitasie van fisiese ongeskiktes as 'n provinsiale verpligting beskou word, sal hierdie syfer hoër wees.

Psigiatriese gevalle word nie oral as die las van die provinsies beskou nie maar indien hulle wel verantwoordelik beskou kan word, is ·5 bedde per 1,000 waarskynlik redelik.

(*b*) *Verminderingfaktore.* Bogenoemde syfers kan aansienlik beïnvloed word deur moderne behandeling bv. die gebruik van antibiotiese middels wat nie alleen die periode van behandeling in 'n inrigting verkort nie maar dit hoegenaamd onnodig kan maak. So ook die gebruik om bv. pasiënte na operasies nie alleen vroeër op te laat staan nie maar vroeër die inrigting te laat verlaat.

Nog 'n faktor wat die noodsaaklikheid vir hospitaalbedde aansienlik kan verminder, is die ontwikkeling van distriksverplegingsdienste. Dit geld vir kraam- sowel as algemene gevalle. Aanstaande jaar sal waarskynlik aansienlike ontwikkeling op hierdie gebied in Transvaal sien.

(*c*) *Die tipe van diens* wat in so 'n hospitaal, benewens vir die gewone genees- en heelkundige gevalle, voorsien sal word sal van omstandighede afhang. In stedelike gebiede sal 'n mate van sentralisasie van spesialistedienste wenslik en moontlik wees. Op die platteland sal sulke dienste vanselfsprekend in 'n groot mate beperk moet word.

Normale kraamgevalle is in die verlede in Transvaal nie juis as die las van die provinsie beskou nie, maar daar kom nou 'n kentering op hierdie gebied en in alle nuwe hospitale word nou voorsiening gemaak vir sulke gevalle. So ook is tering en ander aansteeklike siektes die las van die plaaslike owerhede (gesubsidieer deur Unie-Gesondheid) maar dit is die huidige beleid in hierdie provinsie om oral waar die plaaslike owerheid nie by magte is sodanige fasiliteite te voorsien nie, dit wel in 'n mate in provinsiale hospitale te doen. Tropiese siektes wat die aanleidende oorsaak tot die stigting van sekere hospitale in die verlede was, is nou aan die verdwyn.

Ortopediese dienste word in 'n mate gekonsentreer in stede waar die behoefte daaraan weens die konsentrasie van industrie asook swaarder verkeer die grootste is. Deeltydse besoekende ortopediese personeel kan egter gebruik word om gedesentraliseerde dienste by die groter plattelandse hospitale te voorsien en sodoende druk op stedelike hospitale te verlig.

Vir sover die voorsiening van bedde vir ander spesialiteite soos bv. urologie, oogheelkunde, oor neus en keel, en psigiatrie betref, moet elke geval op sy meriete behandel word.

(*d*) *Groepsgebiedewet.* Met die beplanning van nuwe hospitale of die uitbreiding van bestaande inrigtings sal in die toekoms met groepsgebiede rekening gehou moet word. Die Administrasie is in die posisie van 'n staatsdepartement en kan wat hierdie kwessie betref feitlik na goeddunke handel, maar dit sou sekerlik onverstandig wees om by beplanning die huidige staatsbeleid buite rekening te laat. Die Komitee vir Grondbesit wat met die uitvoering van hierdie beleid belas is, behoort geraadpleeg te word veral wat die ligging van gemengde hospitale betref.

Waar die grootte van aparte woonbuurte dit regverdig, soos in alle stedelike gebiede, is dit die huidige beleid in Transvaal om in die toekoms aparte hospitale daar te stel. In hierdie provinsie is daar reeds 3 suiwer nie-blanke hospitale en 5 meer is al in beginsel goedgekeur. Daar is geen rede waarom 'n blanke en 'n nie-blanke hospitaal in een dorp nie vir administratiewe doeleindes saam gegroepeer kan word nie.

Naturelle-hospitale word nie deur die Departement van Naturellesake in 'n nie-blanke woonbuurt toegelaat nie, hoofsaaklik omdat die blanke personeel nie daar kan woon of vryelik beweeg nie. Die aangewese ligging vir hierdie hospitale is derhalwe in die onmiddellike omgewing van lokasies of gewoonlik in die sogenaamde bufferstroke. Daar kan gemeld word dat naturellebediendes wel in blanke woonbuurtes toegelaat word en daarom is daar, wat dit betref, geen beswaar teen 'n gemengde hospitaal in 'n blanke gebied nie.

Wat gemengde hospitale betref, sou hulle onwenslik wees in 'n suiwer blanke woonbuurt, maar nie noodwendig in 'n besigheids- of industriële buurt nie. Die belangrike faktor hier is nie soseer die hospitaal self met sy akkommodasie vir siekes nie, maar wel die toegange waarlangs die pasiënte en hulle besoekers die hospitaal bereik. Sover moontlik moet toegang tot die hospitaal vir elke groep vanuit die rigting van sy eie woonbuurt verleen word.

Mitsgaders aparte sale is dit die beleid in hierdie provinsie om ook aparte operasiesale en X-straalfasiliteite te voorsien.

3. *Hoe lank neem dit voordat so 'n beplande hospitaal 'n werklikheid word?*

Omdat daar dikwels, en dit is miskien verstaanbaar, beweer word dat daar 'n onnodige gesloer plaasvind vandat die bou van 'n hospitaal in beginsel goedgekeur is totdat die werklike bouery begin, sal dit miskien vanpas wees om af te sluit met 'n kort skets van watter prosedures, in Transvaal in enig geval, intussen gevolg moet word.

Nadat die Uitvoerende Komitee dit in beginsel goedgekeur het, moet die hospitale-uitgawe op die begroting vir die volgende jaar kom. Na gelang van dringendheid kom dit op een van 3 bylae: (*a*) Eerste bylae—dienste reeds in aanbou; (*b*) tweede bylae—dienste wat in boekjaar tenderstadium sal bereik; (*c*) derde bylae—nuwe dienste wat pas goedgekeur is. 'n Gebou moet ten minste op die 3de bylae wees, en die begroting deur die Provinsiale Raad goedgekeur, voor met die beplanning begin kan word.

'n Lys van benodigdhede vir die nuwe hospitale of diens word deur die Hospitaalafdeling opgestel gewoonlik in oorleg met die plaaslike Hospitaalbestuur. Die lys gaan dan na die Geboue-afdeling wat dit aan die argitekte (Provinsiaal maar meer dikwels privaat) oorhandig vir die optrek van sketsplanne. Hierdie sketsplanne gaan terug na die Hospitaalafdeling wat dit na oorlegpleging en dikwels menige herkouing saam met die argitekte, en soms weereens die Bestuur, eindelik goedkeur, en vir finale afhandeling na die Permanente Plannekomitee van die Administrasie deurstuur.

Eers hierna volg die stadium van werkstekeninge deur die argitekte en van bestekopnames, en dan uiteindelik word tenders gevra. Die hele proses neem op sy minste 2 jaar. Die finale produk gee dan satisfaksie totdat sy tekortkomings ontdek word.

THOMAS BENJAMIN DAVIE, B.A., M.B., LLD., F.R.C.P.

AN IN MEMORIAN ADDRESS GIVEN IN LIVERPOOL CATHEDRAL ON 23 DECEMBER 1955 BY THE VICE-CHANCELLOR OF LIVERPOOL UNIVERSITY

We are gathered here in sorrow and mourning for the death of our friend and former colleague Thomas Benjamin Davie, and in thankfulness to Almighty God for the work he achieved during his earthly life and for the example he has set before us. In him our University has lost one of its most distinguished sons and the whole academic world one of its wisest and most valiant leaders.

It was in 1924 that Thomas Davie first came to Liverpool as a student in the Faculty of Medicine. He was then already twenty-eight years old and was embarking upon a second career. Born in South Africa, he had graduated with first class honours in chemistry in the Aftikaans-speaking University of Stellenbosch and had been trained as a teacher. During the First World War he had been commissioned as a pilot in the Royal Flying Corps and had subsequently taught in high-schools in his own country.

It was characteristic of him that once he had made up his mind that medicine, and not high-school teaching, was to be the profession of his choice, he allowed no difficulty to divert him from his path; and slender though his resources were, he faced the future with boldness and determination. It is a matter of pride to us that he deliberately selected Liverpool as his medical school, largely because, as he often told us, the Dean of the Faculty, the late Professor Walter Dilling, showed such understanding and so personal an interest in the application he received from the unknown young man from the other hemisphere.

Davie's career in the Faculty was one of unusual and consistent brilliance. His intellectual power and his capacity for sheer hard work were such that distinctions in examinations and the winning of medals, prizes and scholarships were his well-merited and ungrudged reward. He achieved his degree with first class honours in 1928, his Doctorate in Medicine in 1931; and at a later date he became a Fellow of the Royal College of Physicians.

His professional colleagues are agreed that had he so chosen, Davie could have achieved eminence as a clinical consultant; but his major interest was in the science of pathology. It was in that subject that he became a member of our University staff, first in 1929 as Lecturer and soon as Senior Lecturer. His quality within his chosen field was speedily recognised, and in 1935 he was appointed to the Chair of Pathology in the University of Bristol. Three years later, however, he returned to us as our George Holt Professor, happy to serve again the University he had come to love so much, happy to rejoin his wide circle of friends in Liverpool.

Thus in 1938 it might well have seemed that all the laudable ambition that Davie may have cherished was now satisfied and that the future held nothing but the pleasing prospect of a life of devotion to his medical science, to his students, and to his friends and colleagues.

But for Davie, as for others, the exigencies of war changed the expected course of life and called forth latent powers. It was now that his great administrative abilities became evident, not only within the University, but particularly in the organisation of the regional blood transfusion service; and when in 1945 the University decided that the Faculty of Medicine needed a full-time Dean, it was inevitable that Professor Davie should be the unanimous choice of all his colleagues. Here was a new and untried task to be undertaken; it meant the almost entire abandonment of the teaching in which he had found one of his greatest joys; it meant also, if not the abandonment, certainly the retardation of his scientific research. But to Davie's ear the call of duty was unmistakable and he did not flinch from the sacrifice which was asked of him. Through all the difficulties of a transition period when the National Health Service was being inaugurated, he guided the University with a foresight and soundness of judgment for which we shall ever be in his debt.

The Challenge from South Africa

Then in 1947 came the challenge from the country of his birth: Davie was invited to become Vice-Chancellor of the University of Cape Town. He was aware, as few others could have been, that it was no position of otiose dignity that he was being asked to accept, but one of the most difficult posts in the whole of the academic world, one which would demand of its holder every resource of tact, diplomacy, firmness and courage. Within the very depths of his being he sensed that it was in South Africa that his destiny now lay and that it was there that all that was in him could and should be dedicated in service and endeavour. And it was in South Africa that the real measure of his greatness became apparent for all the world to see.

Here let us pause a moment. Biographical details are only the framework within which we discern, as best we may, the picture of a man. It is on no small canvas and in none but the richest colours that the portrait of T. B. Davie could be painted.

His students and colleagues here in Liverpool recall with affection his familiar figure. A good six feet tall, well-built, fresh complexioned, he was both in physical energy and in powerfulness of mind, the very quintessence of vitality. Vigorous in speech and lucid in exposition, he brought to classroom and laboratory the arts of the naturally gifted teacher; and to his Faculty and to Senate he brought counsel and advice, founded on a balanced judgment and on an unswerving loyalty to the best interests of the University. He had a deep and impelling devotion to his students. They in return gave him their respect, their admiration, and their affection; for he was not content merely to instruct them in the science of pathology. He also continuously set before them the ideals, the noble opportunities and the abiding obligations of their profession. He fostered in them an active love of knowledge and truth wherever it might be found and in whatever guise. Above all, by his own example, by being what he was, he gave them a pattern of upright and manly living.

He was easy to approach, none easier; for he had an all-pervading kindliness, a heart sympathetically attuned to his fellow-men, and a sensitive understanding of their hopes and fears, their doubts and their aspirations. No personal difficulty put to him by student, colleague or friend was too trivial for his interest; and in the ordinary problems of daily life, no less than in matters of greater moment, his robust commensense was like a breath of fresh clean air.

He himself has recorded that his recreation was gardening. We who knew him understand what he meant by that. It was not the lazy enjoyment of other men's labours: he did his own digging: he himself sowed the seed and nurtured the tender plant. Only so could he feel any pride in the maturing crop. There in epitome is the character of T. B. Davie.

One of the most friendly of men, his home was ever open as a haven of hospitality; and on social occasions, and especially in the Students' Union, his genial presence, his sense of fun and his infectious joy in life, added to the pleasure of every company. In all that he did, and in all that he was, there was a glow and a warmth about Tom Davie.

This was the man who sailed forth at the end of 1947 to a new and arduous task in a land where the bonds between Afrikaners and British were loosening, where the word *apartheid* was already a political slogan, where the relations between the State and the Universities were becoming strained. For such a task Davie was fitted as no other could have been. Trained in an Afrikaans University, a man with an established academic reputation, and an experienced administrator, he had a prestige which none could ignore. In addition, there was no aspect of the complex racial and political situation in South Africa with which he was not well acquainted. But beyond all this, he had the moral fibre without which all other qualities and endowments would have been of no avail. If any man could lead his University and his native country in the paths of wisdom, it was Thomas Davie.

Warnings of Crippling Illness

Yet on the very threshold of his new career, and even before he touched the shores of his homeland, he had the warnings of a crippling illness, for which not all the armoury of medical science could provide a cure. Year after year he battled against physical disabilities, long after a lesser man would have asked to be relieved. He refused to regard himself as an invalid. Neither continual pain, nor increasing difficulty in movement nor major surgical operations daunted him; he treated them as annoyances and exasperations, not as obstacles to deflect him from his purpose. He had a task to

perform: the defence of freedom within his University, the upholding of the ideal that Universities should be open to all, irrespective of race, colour, or creed, who can profit by the education they offer.

Single-handed, if need be, he set himself to fight that fight; and he fought to the end. Unyielding to the economic and political pressures brought to bear against his University, he spoke out fearlessly whenever and wherever occasion served. Scrupulously fair to his opponents and respected by them, he passionately believed with all his mind and being in the cause which he upheld; and those who have read them know that his pronouncements on the fundamental nature of a University are amongst the noblest utterances of academic statesmanship.

On him were fixed the eyes of all who value freedom within Universities and without; the fight he fought was not for his University alone, but for all of us. With an indomitable courage, in the face of adversities such as mercifully fall to the lot of few of us, Davie faltered not; for he knew that with the freedom for which he fought there was involved the brotherhood of man and the Fatherhood of God.

It was in large part to demonstrate the faith that was in him that Davie summoned up his last reserves of strength to journey to this country to represent his University at the installation of H.M. the Queen Mother as Chancellor of the University of London. It was there I last saw him: an imposing figure in his robes of office, his eyes full of fire, his handshake firm and friendly, his zest unabated. We could have wished that he might have been spared to come once again to Liverpool, as we had hoped, to receive not only the Honorary Degree of Doctor of Laws, but the tribute of affection, admiration and gratitude which any University would have felt privileged to pay to one who had on him so unmistakably the mark of greatness.

What then should be our feelings as we kneel in this Cathedral to-day? First our love, our sympathy, our prayers for the gracious lady, Vera, his wife, who throughout his career was beside him to comfort and sustain him: she too has her part, and that no small one, in this noble and inspiring record.

Sorrow and regret that we shall see no more that rare spirit who has passed from mortal ken—these are man's fitting tributes to man's mortality. But shining through our sorrow and our regret, let there be thankfulness that in this earthly sphere it has been granted us to know one who has so nobly and so finely shown us to what heights, with God's grace, frail humanity can attain. Let there be thankfulness; let there be resolution too—resolution that, in what measure we can, we too will strive along the same path of duty that he has trod. A life such as that which Thomas Davie lived is as a window through which we see the divinity of the human soul. Let us then take courage from his example and make known our thankfulness by our own devotion to the great and eternal causes to which his life was dedicated and for which he gave his all.

THE ROLE OF FAT IN CAUSING DISEASE OF THE HEART AND ARTERIES

A statement compiled by the Department of Nutrition, Pretoria, says:

Professor Ancel Keys of the United States of America, who recently visited South Africa and here, as elsewhere, conducted research in connection with the causes of diseases of the heart and arteries, is of the opinion that the fat content of the diet is the single most important causative factor in these diseases.

Calories derived from fat, expressed as a percentage of the total calories contained in the diet, vary from 8% in Japan, 15% in the diet of the Bantu in the Union, to more than 40% in the United States of America. Heart and arterial diseases are very rare with the Japanese and Bantu, while they are prevalent in the United States of America and countries where the diet contains much fat.

Fat is a necessary constituent of various kinds of body tissue, however, and is a very good source of energy and warmth. The body cannot remain healthy if the diet does not contain fat. In addition animal fat such as butter and the fat in cheese, eggs, liver and fish contain vitamins which are essential to the body. It also appears that fat is required to enable the body to utilize other nutrients. The question therefore arises: how much fat should be taken to be healthy and to remain healthy?

Expert opinion places the safety level of fat intake for adults at 20-30% of the total calories. In the case of very active persons or children it may safely be increased to 40%. In terms of food this means that fatty foods should be taken in moderation, especially by adults with a sedentary occupation and those who are moderately active; eat bread and butter and not butter with bread; one rich sauce or one fried dish in a meal is sufficient for the middle aged, inactive person and perhaps more than enough; be satisfied with very little fat on the meat; bacon lends a pleasant flavour to a dish and, if used wisely, it will be enjoyed for many more years; tea parties are meant for social intercourse and not to shorten lives, for the fat content of cakes, pastries and savouries is very high; whipped cream increases in volume and therefore a smaller quantity will satisfy than when it is served unwhipped over dessert.

It would be unwise to exclude nutrituous food such as milk, cheese and eggs from the diet for fear of a too high fat content, when methods of preparation and snacks at parties are the real culprits.

Hardening of the arteries and coronary thrombosis as one of the serious consequences, is a threat to Western civilization. An excessive intake of fat appears to be one of the most important causative factors in the deterioration of the blood vessels. It would, therefore, be wise to become accustomed to a dietary pattern which affords a less important place to fat than is the case at present.

PART-TIME APPOINTMENTS IN THE DEPARTMENT OF DEFENCE

The Surgeon General, Union Defence Force, has issued the following information concerning part-time appointments (specialist and general practitioner) in the Department of Defence:

1. It should be noted that in the past these posts were not advertised. They are of a temporary nature renewable every 6 months, and terminable by either side at any time, but usually at a month's notice. To bring this department more into line with provincial and similar services and in the interests of all concerned all part-time appointments will in future be advertised, to enable members of the profession who are eligible to apply for these appointments.

2. Efforts have been made, we are glad to say successfully, to alter and improve the conditions of service of these part-time appointments. As alteration of contract requires advertising (see Government Notice No. 1923, amendments to rules of South African Medical and Dental Council, 4 September, 1953), advertising has become necessary.

3. It is the intention of the department to distribute posts and to enable as many medical men as possible to become acquainted with the military medical set-up. For this reason rotation of posts was decided on and all posts will be advertised periodically, probably every 3 years.

4. Further, as stated, it is intended to encourage part-time officers to obtain knowledge of military organization and routine, for which purpose facilities may be extended and preference given to those who are willing to join the reserve of officers at the time of appointment. Investigation is being carried out on the average age of officers on the reserve and it is hoped to ensure that a sufficient number of officers of the 'active service age' group will be available from the reserve in the event of an emergency.

THE HOSPITAL HORIZON

VALEDICTORY ADDRESS BY DR. LEWIS S. ROBERTSON AT ANNUAL MEETING OF THE SOUTHERN TRANSVAAL BRANCH

The hospital has open to it a great opportunity as a co-ordinator of activities—professional, economic and social—in their application to the problems of health. In its broader aspect it has three primary functions, viz. (1) The care of the sick, (2) medical instruction, and (3) The study of disease.

Dr. Lewis S. Robertson, President Southern Transvaal Branch 1955.

The hospital should be the health centre of the community it serves and therefore must furnish every known up-to-date means for scientific diagnosis and treatment of disease, compatible with its status in the community.

The control of public hospitals is South Africa is generally vested in Hospital Boards, the election and/or appointment of personnel to which is determined by Provincial Ordinances. Medical matters are usually referred to standing Advisory Medical Committees for consideration and report.

There is no debating the statement that an organization without centralized authority cannot function correctly and efficiently and it is equally undebatable that the logical pivot of this centralized authority is the Chief Administrative Officer of the institution. The office of Superintendent in a hospital is the keystone of the entire organization's activity. He must be in possession of all facts currently pertaining to the institution's activity. There must be machinery to bring such facts to his notice as routine measure and not as an incidental performance. Occurrences of an extraordinary nature must be reported to him and reported promptly. The Superintendent's contacts must be intimate and all-inclusive, so as to present to him at all times a composite picture of the entire activity of the hospital. The office of the Superintendent is the medium of expression of policy and the court of appeal for the vexing problems which occur from time to time in the institution's operation.

The administrative functions in the hospital are those activities which, while not being directly the care of the patient, teaching or research, are nevertheless essential to the effective performance of these primary functions. The need for trained executives in hospital administration has frequently been emphasised, for Hospital Administration must be regarded as a career.

Many successful hospital administrators have admitted:

(1) that they entered a hospital administrative career by a process of drift;

(2) that their backgrounds for hospital administrative work were deficient in ways that would have been capable of correction if suitable facilities and opportunities had been available; and

(3) that a previous more-or-less chance experience in administrative work played a significant part in giving them the feeling they might succeed as executives in hospital work.

They are unanimous that a period of actual hospital experience is essential to become a good executive officer.

The Hospital is a complex institution combining medical services, business responsibilities and community relationships and requires skilled administration in order to care adequately for the sick and to utilize funds with economy. The need for trained administrators is strongly emphasised by many leading hospital managers and other informed persons. Inefficiency and waste will result from unskilled management.

No systematic training for hospital administration is available in this country. Curricula in hospital administration are needed, especially for training Superintendents for the smaller hospitals.

Attendance at conferences and visits to other institutions

The attendance of senior officials at conferences relating to hospitalization, and visits to similar institutions in this and oversea countries, should be encouraged to enable them to exchange experiences and discuss problems with colleagues. Hospitals greatly benefit by such consultations because senior officials can always obtain valuable information from such contacts.

Medical Staff

No institution is any greater than the staff which mans it. It is for the advancement of communal health that a hospital primarily exists and it is to the medical staff of the institution that the hospital must look for the materialization of its ideals.

The time when each doctor was a self-sufficient unit in the diagnosis and treatment of his patient has gone. In order to obtain maximum medical efficiency it is necessary to think in terms of organized medical practice. Accepting this as a statement of fact, the necessity of coordinating medical practice is apparent. The medical man by reason of his training and his environment and work tends to become individualistic in his point of view, and the coordination of these individualists into a working whole is fraught with considerable difficulty, Any scheme of organization of a medical department must of necessity guarantee the retention of ultimate responsibility for the care of the patient by the medical officer in charge, but at the same time it must so coordinate the work of all and complement the work of each that the maximum good may be obtained from the composite.

For good and coordinated medical services it is essential for the medical staff to initiate and, with the approval of the governing board, adopt rules, regulations and policies governing the professional work of the hospital. Such rules should provide for medical staff meetings and the review and analysis at regular intervals of all rules and regulations.

The necessity of approved ward, theatre and departmental procedures available to all members of the staff who have to perform the medical duties is obvious. Standardization as far as is practicable will avoid confusion and ensure efficiency. No change or amendment of procedures should be made unless the consensus of opinion of the majority is that a change will be beneficial.

Orders and instructions regarding treatment must be given in writing, except in emergencies, when verbal orders are permissible, but even these should be confirmed subsequently in writing at an early date.

In filling vacancies on the staff merit should be the main consideration.

Special Diagnostic and Therapeutic Services

It is in the diagnostic and special therapeutic services that a hospital really indicates its fullest ecceptance of its responsibilities. Clinical practice of medicine is not complete without having its services complemented by special departments. The diagnosis and treatment of disease have progressed to a point where the clinician alone cannot offer all the services needed. The various special diagnostic and therapeutic facilities are essential. The hospital must, if it accepts its true position in the community, furnish all these facilities.

Cooperation of the Hospital with the Family doctor

The hospital owes a debt to the family doctor that cannot be paid by merely admitting his patients. Cooperation and thoughtfulness on the part of the hospital authorities will earn the appreciation of the family doctor. Hospitals have learned by experience how valuable is his cooperation. A system must be devised to furnish the family doctor with essential medical information relating to the condition and continuity of treatment of patients he refers to the Hospital.

Outpatient Department

The medical profession has become more and more articulate in recent years against an alleged exploitation of their services by

institutions. The large output of medical graduates from our schools of medicine is creating an economic problem which prods many a doctor to attack a system which may seem without careful analysis to affect his private interest. The growth of out-patient departments or clinics in hospitals has been one of the important developments of hospital service. Abuses have been discovered in individual instances but, with the intelligent application of methods of financial investigation and social-service appraisal, such impositions should be reduced to a minimum.

Let us go into retrospect to bring out the real intent of the establishment of the out-patient department. The tradition upon which it was established was from the standpoint of the community to meet a need for the care of those unable to pay for medical treatment. When the first out-patient departments were initiated, they were established at the suggestion of doctors on the hospital staffs in order that they might give continuity of care to those who had been treated in the free wards and were not able to pay for aftercare. The hospital out-patient department grew and now fills a specific need in the community. It is not a side show in the hospital service and its value to the community is immense. It is essential, however, that the medical care given in the department shall be adequate. In order to avoid differences with the medical profession there are factors which must be observed:

1. There should as far as possible be no competition between the out-patient department and the practitioner in his private practice.

2. The interview of the prospective out-patient with the almoner should be thoroughly enough done, and by an experienced official who should be reasonably sure that the statements made by the patient or guardian are accurate.

In setting up a scheme of out-patient operation the motivation should be the rendering of the highest possible type of medical service to ambulant patients, and its operation should be dominated by this idea. The volume of patients is not nearly so important as the numbers of patients intensively cared for and returned to the community in the shortest possible time as productive, economic units. A properly functioning out-patient department is a definite factor in the education of that vast group of the community which is in need of the greatest guidance in the care of the body. The application of specific therapy is valuable, but it ceases to accomplish the desired result if with the administration of that treatment is not included, either by direct comment or instruction, an idea of prevention of the recurrence of the condition.

The development of special clinics may be motivated by the desire to render more efficient services in individual cases, but analysis of the performance of these clinics demonstrates clearly that their true value lies in the fact that they permit more intensive educational work with patients in the care of their present condition and in the elimination of recurrence. They all have a very definite medical reason for their existence but they have an equally important social and educational reason.

Nursing

No matter what the hospital's ideals of service are, it is to the department of nursing to a greater extent than any other that the hospital must look for an expression of its ideals to its patients. It is the attitude of the nurse, her method of approach and her thoughtfulness for the patient's comfort, that creates favourable or adverse comments on the hospital's service. A well-organized and well-functioning nursing service is of paramount importance to the best interest of the institution.

The nursing service has two fundamental phases—the actual nursing of the sick and the teaching of student nurses. The importance of the tremendous influence the medical staff involuntarily brings to bear upon the training and attitude of the nurse to her vocation, cannot be over-emphasized.

Dietary

The need for a scientifically balanced meal, properly prepared and properly served, is acknowledged, but at the same time it is important that the food should be palatable. There is nothing inconsistent in serving a scientifically prepared meal palatably, provided effort is directed along these lines. Such people are difficult to please through the palate. Second only to the nursing service in directness of contact is the dietary department, and second only to the nursing activity is the measure of the institution's success gauged by the patient's reaction to the dietary performance. That a successful dietary performance is a decided asset to the institution is unquestionable.

Acquainting the Public with Hospital Policy

The public has too long remained in ignorance of one of its noblest servants. In many instances, through misinformation and ignorance of facts, people have assumed an erroneous conception of hospital service and in some cases have even grown antagonistic. In the present day, when education is becoming more generalized and widespread, it is logical and right that the work of an institution which comes into direct contact with about 1 out of every 10 persons each year, should be thoroughly understood and appreciated by the public whom it serves.

Basic for any programme of public education is the worthiness of the cause. To this end the hospital must measure up to all claims made. Good service can only be assured through a well-equiped and properly-organized institution in which the personnel is imbued with the spirit of wholesome, efficient and unselfish service characterized by kindness, sympathy and interest in the individual patient. The spirit of the hospital personnel is most vital to a successful institution.

The hospital must make an appraisal of its own resources in relation to the needs of the community it serves, and no campaign of public education can advance with success unless it is intelligently and carefully planned. A programme of education to acquaint the public with its hospitals cannot happen of its own accord. Its success will depend upon thorough cooperation, initiative and originalty, and unqualified support and enthusiasm. Every phase of the programme must be in strict harmony with the principles of the code of medical ethics. Since it is generally conceded that individuals cannot live independently, we must assume the same to be true of institutions. The community should be informed of the needs, service and necessary improvements of its hospital services. The programme of public education is never-ending.

Politicians and office bearers are continually changing and it becomes necessary to educate these people so that they will see the hospital from a humanitarian standpoint. The daily media for propaganda are the press and radio, and their services will be of inestimable value.

CONCLUSION AND SUMMARY

The hospital plays an important role in the life of the community; hence a high standard is essential. It affords many opportunities for medical staff members to keep abreast of their profession. The hospital should be a centre of education of the medical profession through its diagnostic and other facilities. It should be the source of general health knowledge to the community. The hospital cannot be separated from the problems of health. In its truest sense the hospital is an ideal of service conceived and dedicated to combat disease, including within its operation all the facilities known to mankind for the alleviation of suffering.

VALEDICTORY ADDRESS BY DR. D. W. BURTON AT ANNUAL GENERAL MEETING OF THE BORDER BRANCH

At the Annual General Meeting of the Border Branch held in East London on 11 February 1956 the outgoing President, Dr. D. W. Burton delivered his valedictory address.

Dr. Burton said that in choosing his subject he had decided to resist the temptation to wax forth on such contentious contemporary subjects as medical aid schemes, the specialist—*v* G.P. battle or complusory membership of the Association. Instead, he would delve into the past and talk about the times when all was peaceful, when there were no wrangles about the profession being mercenary and when only local opposition was the witch-doctor.

He proposed to talk briefly of the rise and progress of the Border hospitals. He had chosen this subject primarily because the

year 1956 marked the centenary of the first civil hospital founded in King Wiliam's Town. This was founded in March 1856—a notable event in Border history and one which enabled them to assess the great advances in hospitalization made during a century of urgent endeavour and enterprise in an area where the evils and oppressions of barbarism, heathenism and witchcraft dominated and influenced the lives and characters of all tribes on the ever-restless Cape Frontier.

Dr. Burton recalled that King William's Town, the oldest of the Border towns, was founded in May 1835 by the Governor, Sir Benjamin D'Urban. The Port of East London was proclaimed by Sir Harry Smith in January 1848. Beyond the northern boundary of British Kaffraria, Sir George Cathcart founded the District and Town of Queenstown in 1853. In such manner arose the three main towns of the Border in early days when civil hospitals were unknown and military hospitals were exclusive military institutions administered by military personnel.

The First Civil Hospital on the Border

In March 1856, when the nearest public hospital was at Grahamstown—over 70 miles distant from King William's Town—the first civil hospital in Border history was established in the capital of British Kaffraria. Situated in the Pensioners' Village and known as the Native Hospital, this institution consisted of about 20 cottages originally built to accommodate pensioners. As pensioners had failed to come to the Cape Colony, the unoccupied thatched cottages were combined to form a hospital over which Dr. John Patrick Fitzgerald assumed duty as Superintendent. Although it was styled the Native Hospital, indigent Europeans were received as patients and all expenses were borne by the Imperial Government During the 3 years of its existence the entire staff consisted of Natives trained by the doctor, assisted by interpreters and a few local Europeans. It was of interest to know that before his arrival in King William's Town Dr. Fitzgerald (under the direction of Sir George Grey) had established hospitals for the Maoris in New Zealand. In this first Border hospital the numerous starving victims of the Cattle Killing Delusion were accommodated in 1857. While thus busily engaged, Dr. Fitzgerald made plans for the construction of the present Grey Hospital, the doors of which were opened for the reception of patients in June 1859, when Dr. Fitzgerald was in England on sick-leave.

Concerning Grey Hospital, it was noted in the doctor's records of 1859 that trained nurses were not to be had for love or money. Of more than passing interest was a letter addressed to Sir George Grey requesting the Governor to engage the services of Florence Nightingale on behalf of the Grey Hospital.

The speaker referred to Dr. Fitzgerald's work at the Grey Hospital as an ophthalmic surgeon, in the course of which he restore the sight of more than 200 blind Natives, to the confusion of the witch-doctors. After 35 years service on the Border and at the age of 76 years, Dr. Fitzgerald returned to England, where he died in 1897 at the age of 82.

Frontier Hospital, Queenstown

Dr. Burton then passed on to the Frontier Hospital at Queenstown, which came next in order of time. Before this hospital was established, beds for accident cases were set apart in Queenstown gaol. In 1876 the Hon. Charles Brown laid the foundation stone of the Frontier Hospital, of which the inception had been promoted by Drs. Bisset-Berry and Weakly with the support of other residents. Miss Alice Perrin was the first matron. In that year two farms were granted for hospital maintenance—Hospital Farm at Thomas River and Glen Thorn at Imvani—the rents from which were to be devoted to hospital purposes. With permission, the two farms were sold for about £16,000, which was invested.

Frere Hospital, East London

Last of the three Border hospitals came the Frere Hospital at the 'Fighting Port'. Named in honour of the Governor Sir H. B. E. Frere, this hospital was founded in 1881. The foundation stone was laid by Mr. Richard Walker, the first Mayor of East London. On that occasion, in a procession up Oxford Street marched the bands of the Rev. Mr. Muller's School and The Volunteer Artillery, with the civil and civic authorities and the Sunday schools. In his speech Mr. John Gately, referring to the Grey Hospital at King William's Town, then under the Imperial Government, said that patients half dead in East London had to be sent to the King William's Town hospital, greatly to the discomfiture of Dr. Fitzgerald. That was soon to be ended; in August 1882 the Frere Hospital was under construction. The first Superintendent and Matron were Mr. and Mrs. Sunfield.

Amongst those interested in the founding of the Frere Hospital Dr. Burton specially mentioned Dr. Paley and Dr. Darley Hartley. Those, he said, were the days when red lamps shed rays about the front doors and verandahs of doctors' houses. In those bygone years, when East London was East London West and Panmure laid claim to the East side of the Buffalo River, these doctors were prominent in their work for the hospital. Dr. Paley, ever dear to all East London residents, was District Surgeon; his colleague, Dr. Darley Hartley, was the first Editor of the South *African Medical Journal*, which saw the light of day through its first issue at East London.

The speaker then spoke of a gap of 50 years until the opening of the New Frere Hospital in 1932. The total building-cost was £89,628 and it was constructed to accommodate 202 beds. Today the official bed state was 456.

Dr. Burton recalled that the first Chairman of the Hospital Board was Mr. S. T. Wakefield; and he read the names of the honorary staff at that time: Consulting Surgeon—P. Ganteaume; Consulting Physicians—J. Bruce-Bays and E. R. Grey; Radiologists—J. Alexander-Brown and Murray Craib; Anaesthetist—J. Wroth-Adams; Visiting Surgeons—A. M. Pollock, J. P. Ziervogel, G. J. Smyth and W, Waddell; Visiting Physicians—J. Tremble, G. Nesbitt, L. Jaffit and F. B. Watts.

Having spoken of the three hospitals in the larger towns, the speaker then referred to the prodigious labours of the mission hospitals Lovedale, St. Matthews and Mount Coke.

Having reviewed what has been accomplished in so short a time, Dr. Burton went on to say that, comparatively speaking, they were slowing up and that progress on the Border, particularly in the last 20 years, had been tardy. He thought they could all vouch for the fact that the present hospital accommodation was insufficient to meet the growing demand consequent on the increase in population. In addition there was a very urgent need for a chronic sick hospital on the Border. Dr. Burton then said: 'So I would conclude this address with a special appeal to the Branch, its Divisions, Hospital Committees and Hospital Boards to clamour and to keep clamouring for improvements. If we do not raise our voices, the Provincial Authorities in Cape Town naturally assume that we are content and happy with our lot and we shall consequently be kept on the "Waiting List". I trust that this appeal will be taken up not only by our local Divisision but also by the country areas. The Frere Hospital with its auxilliary and, specialist services, draws a large number of hinterland patients and accordingly, if the country Divisions lend us their support, they will at the same time be furthering their own interests.

'Let us make this centenary year of hospitalization on the Border a year of earnest endeavour in an attempt to rectify what is a very unsatisfactory state of affairs.'

RECENT ACCESSIONS TO THE MEDICAL LIBRARY, UNIVERSITY OF CAPE TOWN

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Harrow, B. and A. Mazur. Textbook of biochemistry. 6th edition. Saunders, 1955.
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Kotinsky, R. and H. L. Witmer, editors. Community programs for mental health: theory, practice, evaluation. Harvard U. P. for the Commonwealth fund, 1955.
Larsson, T. and T. Sjögren. A methodological, psychiatric and statistical study of a large Swedish rural population. Munksgaard, 1954.
Luisada, A. A. The heart beat: graphic methods in the study of the cardiac patient. Lewis, 1953.
McIlwain, H. Biochemistry and the central nervous system. Churchill, 1955.
Masserman, J. H. The practice of dynamic psychiatry. Saunders, 1955.
Maximow, A. A. and W. Bloom. A textbook of histology. 6th edition. Saunders, 1954.
Merrill, J. P. The treatment of renal failure: therapeutic principles in the management of acute and chronic uremia. Grune & Stratton, 1955.
Newton, W. H. Recent advances in physiology. 7th ed. Churchill, 1949.
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Paton, R. T. Keratoplasty. McGraw-Hill, 1955.
Pearse, A. G. E. Histochemistry, theoretical and applied. Reprinted. Churchill, 1954.
Platt, Sir H., editor. Modern trends in orthpaedics. Butterworth, 1950.
Pugh, D. G. Roentgenologic diagnosis of diseases of bones. Williams & Wilkins, 1954.
Saunders, L. Cultural difference and medical care: the case of the Spanish-speaking people of the Southwest. Russell Sage foundation, 1954.
Sonesson, A. Odontogenic cysts and cystic tumours of the jaws. Berlingska Boktryckeriet, 1950.
Stein, I. and others. Living bone in health and disease by Irvin Stein. Pitman, 1955.
Swyer, G. I. M. Reproduction and sex. Routledge, 1954.
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Wright, H. R. L. and H. B. Wright. Contraceptive technique: a handbook for medical practitioners and senior students. Reprinted. Churchill, 1953.
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OFFICIAL ANNOUNCEMENT : AMPTELIKE AANKONDIGING

MEDICAL AID SOCIETIES

Once more attention is drawn to the fact that the *Mutual Medical Aid Society of* 1954 (Onderlinge Mediese Hulpvereniging van 1954) is not recognised by the Association. Members should not confuse the abovenamed society with the *S.A. Mutual Life Assurance Society Staff Medical Aid Fund* which is an approved society catering for the staff of the Old Mutual.

L. M. Marchand
Associate Secretary

Medical House
Cape Town
9 March 1956

MEDIESE HULPVERENIGINGS

Nogmaals word die aandag van lede bepaal by die feit dat die *Onderlinge Mediese Hulpvereniging van* 1954 (Mutual Medical Aid Society of 1954) nie deur die Vereniging erken word nie. Hierdie hulpvereniging moet nie verwar word nie. met die *S.A. Mutual Life Assurance Society Staff Medical Aid Fund* wat 'n goedgekeurde vereniging vir die personeel van die Ou Mutual is.

L. M. Marchand
Medesekretaris

Mediese Huis
Kaapstad
9 Maart 1956

PASSING EVENTS : IN DIE VERBYGAAN

Eli Lilly Medical Research Fellowship. Applications for the 1956 award of this Fellowship may now be submitted and must reach Dr. H. A. Shapiro, Honorary Chairman, Selection Committee, P.O. Box 1010 Johannesburg not later than 30 April 1956.

* * *

The Belgian government has withdrawn its attempt to regulate medical care and medical service under its Social Security scheme through legislative status, and has agreed to accept the principle of non-intervention through law, and to recognize the conventions agreed upon through the joint efforts of representatives of the medical profession and the insurance companies. This is the result of the opposition of the medical profession in Belgum to proposed legislation in regulation of medical service.

Dr. E. W. S. Deale, whose Presidential Address to the Natal Coastal Branch appeared in the *Journal* of 10 March, 1956.

The Deutsche Medizinische Wochenschrift, published by Georg Thieme Verlag, (14a) Stuttgart, Herdweg 63, is now publishing an English translation of that journal in a monthly edition, under the title *German Medical Journal*. The editor of the English language edition is Dr. G. R. Graham, London. The first number, of January 1956, consists of 36 pages, 12½″×9¼″, printed in double column, and comprising, besides illustrations in the text, four pages, one in colour, of photographs.

* * *

French Bursaries for South African Students. The French Government has established 5 bursaries for South African students who wish to continue their studies in France during the academic year 1956-57. The duration of these bursaries and the monthly allowance (from 30,000 to 60,000 francs, equivalent to £30 to £60) vary according to the nature of the studies to be undertaken (education, law, economy, political science, scientific research, medicine, engineering, architecture, arts, etc.). The class fees and travelling expenses back to South Africa will also be paid by the French Government. Applicants should not be more than 30 years old (35 for certain studies in exceptional cases) and must have a good knowledge of the French language so that they can benefit without undue delay from the courses of instruction they will receive in France. Applications must be accompanied by the school and university curriculum of the student and by a statement in French showing clearly which subjects the applicant wishes to study during his stay in France and mentioning the institution at which he wishes to be registered. The applicant must state whether he already holds another bursary. Applications should be addressed direct to the French Embassy, Glenhof Road, Newlands, Cape, where further particulars may also be obtained.

REVIEWS OF BOOKS : BOEKRESENSIES

MEDICAL STATISTICS

Statistics of Therapeutic Trials. By G. Herdan, M.Sc., Ph.D., LL.D. Pp. 367 + xvi, with 80 illustrations. 50s. Amsterdam, Houston, London and New York: Elsevier Publishing Company for Cleaver-Hume Press Ltd. 1955.

Contents Part I Fundamental Principles. 1. The Concept of Therapeutical Statistics. 2. Nosographic Criteria for the Therapeutic Comparison. 3. The Concept of Clinical Controls—Statistical Design. 4. The Concept of Chance Control—Statistical Evaluation. 5. Sources of Error in Therapeutic Research. *Part II: Therapeutic Trials in Acute Diseases.* 6. The Outcome of the Disease as Criterion for the Therapeutic Comparison. 7. The Duration of the Disease as Criterion for the Therapeutic Comparison. 8. The Intensity of Specific Characteristics as Criterion for the Therapeutic Comparison. 9. Number and Severity of Complications as Criterion for the Therapeutic Comparison. 10. Pneumonias. 11. Poliomyelitis. 12. Scarlet Fever. 13. Diphtheria. 14. Typhoid Fever. 15. Pneumococcal Meningitis. 16. The Trend of the Disease before and after Treatment as Criterion for the Therapeutic Comparison. 17. Evaluation of Differences in the Trend of a Disease. 18. The Combination of a Number of Individual Chronic Cases. 19. The Comparison of Stationary Periods of the Disease. 20. The Quantitative Therapeutic Investigation. 21. Survival Rate after Treatment. 22. Radioactivity of Isotopes and Electrophoresis of Serum Proteins as Criteria for the Therapeutic Comparison. 23. Cancer. 24. Tuberculosis of the Lung. 25. Rheumatoid Arthritis. 26. Congestive Heart Failure. 27. Hypertension. 28. Diabetes. 29. Nephritis. References. Appendix.

There will be many in the medical profession who will congratulate the author in foregoing the conventional approach to medical statistics. In his book, the approach is primarily medical and an attempt is made to allocate to certain typical situations the statistical methods that are most suitable for dealing with them individually. After all, the medical research-worker's approach is from this angle. He has his problem, he wishes to plan his experiment and then to interpret his results. Which statistical technique should be used? On consulting the conventional statistical textbook he is confronted by a mass of mathematics and a number of statistical methods, and is soon at a loss to know which method is best suited for his purpose. He searches for examples. He meets rats and other biological material, fertilized plots or other agricultural examples, with which he has to compare the psychosomatic idiosyncrasies of man's reaction to disease. To the reviewer's knowledge, this is the only book published that overcomes this difficulty. Purely medical examples are used throughout.

At the same time the author has made every effort to keep the mathematics of the statistical techniques at their irreduicble minimum, and they are introduced as the situation requires. This grants the clinician the opportunity to acquire a working knowledge of the subject with less effort and in a shorter time than the conventional approach. The standard error test, chi square test, and correlation and regression, are the techniques expounded in this book. Those of us who believe in the importance of medical statistics will regret that space did not allow of the further exploitation of this commendable approach in the realms of analysis of variance and the somewhat more complex techniques of curvilinear and multiple regression. It is to be hoped that the author has the intention of reserving this for a second volume.

B.B.S.

HIGH BLOOD PRESSURE

High Blood Pressure. By G. W. Pickering, M.A., M.B. (Cantab.), M.D. (Ghent), F.R.C.P. Pp. 547 + viii, with 106 illustrations. 65s. London: J. and A. Churchill Ltd. 1955.

Contents: 1. Introduction. 2. Measurement of Arterial Pressure in Man. 3. Diurnal Variations in Arterial Pressure. The Immediate Responses to Environmental Changes. 4. Physiological Aspects of Arterial Pressure. 5. Experimental Hypertension. 6. The Classification of Hypertension. 7. The Circulation in Essential Hypertension. 8. The Arterial Pressure. 9. The Role of Inheritance in Essential Hypertension. 10. The Role of Environmental Factors in the Genesis of Essential Hypertension. 11. Arterial Changes in High Blood Pressure. 12. Essential Hypertension. Concept and Clinical Features. 13. The Benign and Malignant Phases of Hypertension. 14. Prognosis of Essential Hypertension. 15. The Treatment of Hypertension. 16. Nephritis and Nephrosis. 17. Pyelonephritis. 18. Miscellaneous Conditions Associated with High Blood Pressure. 19. Polyarteritis Nodosa. 20. Chromaffin Cell Tumour (Phaeochromocytoma). 21. Cushing's Syndrome. 22. Coarctation of the Aorta. 23. Hypertension and Pregnancy. 24. Practical Points in the Diagnosis and Management of Patients with High Blood Pressure. Appendix—Calculation of Age and Sex-Adjusted Score. Bibliography.

Here is an authoritative reference on one of the most important yet most controversial subjects in medicine, a condition high up in the list of principal causes of death, a condition of prime imimportance with regard to life insurance and a condition over which we now have drugs to exercise control. This book is not merely a rehash of previous text-books on high blood-pressure. It is a graphic account of the lifetime's work of a man who has become renowned for his capacity for original observation and thought, and a man well practised in the experimental, physiological and clinical branches of this subject. Punctuated by his characteristic wit, the style in which the book is written bears the stamp of his earlier days as a classical scholar, yet the contents represent the practical approach of a scientist actively engaged in clinical medicine; indeed a rare combination.

There is much in the book to interest many readers. The first half will interest the physiologist, experimentalist and pathologist, and the medical practitioner engaged in insurance work. Here the difficult distinction between normal and abnormal is well emphasized and such controversial problems as the role of inheritance, the rise in blood pressure with age, the relationship to atherosclerosis, the association with obesity, and the bearing of arm circumference, have been discussed and illustrated by experiment. Included are tables that make the correction of the blood pressure for age, sex and arm circumference an exceedingly simple matter.

The latter half will be of more interest to clinicians, for it deals with clinical states frequently associated with elevation of the blood pressure; the chapter on phaeochromocytoma being most instructive. In the latter half, practitioners will enjoy the simple practical manner with which the management of a patient with high blood-pressure is treated—a state of affairs often of great concern to some practitioners and, if mismanaged, of dire consequence to the patient. It is this section however, that will need frequent revision with the rapid advance in therapy that is taking place today.

To one who has seen this book in preparation and has seen the meticulous care with which each chapter was produced, the extremely high standard of the final product is no surprise.

B.B.S.

THE QUARTERLY JOURNAL OF THE MEDICAL ASSOCIATION OF SOUTH AFRICA

South African Journal of Laboratory and Clinical Science. It is now just over a year since the *South African Journal of Laboratory and Clinical Medicine* came into being as a successor to *Clinical Proceedings*. *Clinical Proceedings* was started by the Postgraduate Association in Cape Town, and when that body eventually ceased to function, the Journal Committee of the Association decided to continue the publication, but under a new name.

The *South African Medical Journal* is one of particular general interest and has a wide appeal, but there is a definite need for another Journal, with a more limited appeal, insofar that it concentrates on the original work of the medical men of South Africa, and its choice of articles are naturally more technical in detail and direction. The *South African Medical Journal* with its wider appeal to the general reader, cannot hope to encompass and to embrace the more technical aspects of the individual specialties, but the *Journal of Laboratory and Clinical Medicine* has continued to act as a forum for the reception of such work until the individual specialties in South Africa obtain or develop Journals of their own.

At present, the *Journal of Laboratory and Clinical Medicine* undoubtedly fills this need. It is well edited, ably produced and its Editorial Board contains distinguished members of the Medical Association, the South African Institute of Medical Research, each of the Universities and the Union Health Department. They are to be congratulated on their work in the production of this Journal which so ably keeps pace with the advancing fields of Medicine in South Africa. While its circulation at present is not as wide as one would wish, the interest and importance of its contributory articles in the last year have been a source of inspiration to many. As time goes on, this Journal will most probably increase in size, since more original work is being done in South Africa, and the increase in range of its contributions mark it as a Journal of growing importance of the medical life of this country.

T. B. McM.

MEDICAL ANNUAL

The Medical Annual. A Year Book of Treatment and Practitioners' Index. Edited by Sir Henry Tidy, K.B.E., M.A., M.D. (Oxon), F.R.C.P. and R. Milnes Walker, M.S. (Lond.), F.R.C.S. Pp. 548 + xliv with illustrations and plates. Bristol: John Wright & Sons Ltd. 1955.

Contents: 1. Introduction by the Editors. 2. Review of the Year's Work. 3. The Practitioners' Index: Recent Pharmaceutical and Dietetic Preparations, Medical and Surgical Appliances, etc. 4. Books of the Year. General Index.

Those who like their annual 'home refresher course' will once again welcome this 1955 edition of an old and trusted friend. Its arrival is an annual reminder (like one's birthday) that one is older (and we hope wiser) and that medicine advances in a similar fashion. There are other annuals for sale which fulfil a somewhat similar function; each reader must select the one he likes best. The fact that the medical annual is in its 73rd year shows that it certainly commands a faithful following—and rightly so. For it covers much of the world's (and especially the British) literature in its review of the years work and there can be little of topical interest to the practitioner which is not to be found in its pages. Instead of reviewing any individual paper *in intenso* the editors have selected a notable list of contributors, each of whom has written and edited one or more sections of the book. In the main, under each heading, they have concentrated on writing a critical review and have not hesitated to express their own opinions as well. There are in effect a number of 'essays' each of which presents modern concepts of a subject in a readable and authoritative manner.

The articles reviewed appear in alphabetical order and it is rather startling to jump from ganglion to gastric ulcer and from hernia to herpes simplex. Medicine, surgery, obstetrics and gynaecology and all the specialties are mixed in this medical pie; the book is aimed at the general practitioner, who perforce requires to know more and more about all subjects. But even specialists in a particular field will find something to interest them, though they must not expect the concentration that is only to be found in a book entirely devoted to a single specialty.

The practitioner's index at the end of the book will help practitioners to master some of the trade names for recently marketed drugs—and in these days an index like this is becoming more and more necessary. One is rather appalled to notice that this section alone occupies 22 pages of small print.

All in all, the mixture as before—and just as welcome.

C.M.

SKIN DISEASES

Systemic Associations and Treatment of Skin Diseases. By Kurt Wiener, M.D. Pp. 556 with illustrations. £7 4s. 6d. St. Louis: The C. V. Mosby. 1955.

Contents: Part I. Systemic Associations of Skin Diseases. 1. Lupus Erythematosus, Cutaneous (Discoid) Form. 2. Systemic Lupus Erythematosus. 3. Scleroderma. 4. Dermatomyositis (Polymyositis). 5. Erythema Exudativum Multiforme (Hebra). 6. Erythema Nodosum. 7. Acne Vulgaris. 8. Rosacea. 9. Eczema—Atopic Eczema. 10. Eczema—Contact Eczema. 11. Eczema (not specified). 12. Eczema (not specified) and Nutrition. 13. Eczema—Systemic Therapy. 14. Erythroderma Exfoliativum (Dermatitis Exfoliativa). 15. Urticaria. 16. Urticaria. 17. Pruritus. 18. Psoriasis. 19. Psoriasis. 20. Parapsoriasis and Acrodermatitis Chronica Atrophicans. 21. Lichen Planus. 22. Pemphigus Vulgaris. 23. Pemphigus—continued. 24. Dermatitis Herpetiformis (Duhring's Disease). 25. Herpes Zoster, Shingles. 26. Acanthosis Nigricans. Light Dermatoses and Porphyria, Lipidoses, Pyoderma. 27. Diseases of the Sweat Apparatus, Pruritus and Kraurosis Vulvae, Keratoses, Pseudoxanthoma Elasticum. 28. Hair Diseases, Vitiligo. *Part II: Systemic Treatment of Skin Diseases.* 29. ACTH (Adrenocorticotrophic Hormone), Cortisone, Hydrocortisone. 30. Hormones and Organ Extracts. 31. Antibiotics. 32. Sulfonamides. 33. Antihistaminic Agents. 34. Metals. 35. Metals. 36. BAL (British Anti-Lewisite, Dimercaprol). 37. Autonomic Drugs-Miscellaneous. 38 Quinine Group. 39. Vitamins—Miscellaneous. 40. Vitamin D_2 (Calciferol) and the Systemic Therapy of Skin Tuberculosis. 41. Nonspecific Agents: Vaccines. 42. Diets. 43. Spinal Roentgen Therapy; Sympathetic Surgery. 44. Spa Therapy of Skin Diseases: Unorthodox Methods.

This book is a companion to the author's earlier work *Skin Manifestations of Internal Disorders.* Its scope is indicated in the list of contents shown above and it consists largely of a review of the literature with little intrusion of the author's own views. Although nearly 3,000 articles or excerpts from the literature have been consulted the choice does not seem to have been very critical and much available important work has been missed. Urticaria pigmentosa is dismissed in less than half a page without reference to maliganant mastocytosis; no mention is made of the role of insects in the cause of urticaria papulosa; pseudoxanthoma elasticum is covered in 2 pages and Touraine's work is ignored. It is stated that in acute (intermittent) porphyria no skin manifestations other than chloasmatic and diffuse pigmentations are known; and the ocular lesions in porphyria, described by Boshoff and Barnes, are not noted. The chapter on parapsoriasis would have been very much better if it had been based on Civatte's work.

There is little in this book which cannot be found in any good text-book of dermatology.

J.M.

BOOKS RECEIVED: BOEKE ONTVANG

Modern Treatment Yearbook 1956. Edited by Sir Cecil Wakeley Bt. K.B.E., C.B. LL.d., M.Ch., D.Sc. F.R.C.S., F.R.S.E., F.R.S.A. F.A.C.S., F.R.A.C.S. Pp. 344+xxiii, with illustrations. 25s. London: Baillière, Tindall & Cox. Ltd. 1956.

Porphyrin Biosynthesis and Metabolism. By G. E.W. Wolstenholme, O.B.E., M.A., M.B., B.Ch. and Elaine C. P. Millar, A.H.W.C., A.R.I.C. Pp. 308 with 70 illustrations. 30s. net. London: J. & A. Churchill Ltd. 1955.

The Clinical Approach in Medical Practice. By G. E. Beaumont, M.A., D.M., F.R.C.P., D.P.H. Pp. 469 with 74 illustrations. 45s. net. London: J. & A. Churchill Ltd. 1956.

Lippincott's Quick Reference Book for Nurses. By Mary E. Allanach, A.M., R.N.; Elizabeth S. Gill, B.S., R.N.; Helen F. Pettit, A.M., R.N.; Dorothy E. Reilly, M.S., R.N. and Nelda Ross Larsson, M.S. Seventh Edition. Pp. 727. 32/- net. London: Pitman Medical Publishing Co. Ltd.

Child Health and Development. By various authors. Edited by R. W. B. Ellis, O.B.E., M.A., M.D., F.R.C.P., F.R.S.E. Pp. 525 with illustrations. 42s. net. London: J. & A. Churchill Ltd. 1956.

The Role of Algae and Plakton in Medicine. By Morton Schwimmer, M.D. and David Schwimmer, M.D. Pp. 85. $3·75. New York: Grune & Stratton, Inc. 1955.

A.M.A. Scientific Exhibits 1955. Pp. 784. $20·00. New York: Grune & Stratton, Inc. 1955.

Acta Oto-Laryngologica Supplementum 124. (Voice and Speech Patterns of the Hard of Hearing). By Jacques Paul Penn, Ph.D. Pp. 69. Sweden: Almqvist & Wiksells. 1955.

Sex Problems and Personal Relationships. By E. Parkinson Smith and A. Graham Ikin. Pp. 149. 10s. net. London: Messrs. William Heinemann Medical Books Ltd. 1956.

Bantu Gynaecology: By G. P. Charlewood, M.B., Ch.B., F.R.C.S., F.R.C.O.G. Pp. 172. Johannesburg: Witwatersrand University Press. 1956.

Eredita E Localizzazioni Morbose: By Teodori-Borghi-Neri Serneri. Pp. 246. £.2,000. Pisa. Edizioni "Omnia Medica". 1955.

A Handbook of Medical Hypnosis. By Gordon Ambrose, L.M.S.S.A. and George Newbold, M.B., B.S., M.R.C.S., M.M.S.A., D.R.G.O.G., D.C.H. Pp. 256.+xiv First Edition. 21s. London: Baillière, Tindall & Cox. 1956.

Cordiovascular Innervation: By G. A. G. Mitchell, O.B.E., T.D., M.B., Ch.M., D.SC. Foreword by Sir Geoffrey Jefferson, C.B.E., M.S., M.Ch., M.Sc., LL.D., F.R.C.P., F.R.C.S., F.R.C.S.I., F.R.F.P.S., F.A.C.S., F.R.S. Pp. 356 with 217 illustrations. 55s. net. London: E. & S. Livingstone Ltd.

Outline of Orthopaedics: By John Crawford Adams, M.B. (London), F.R.C.S. (England). Pp. 423. with illustrations. 32/6 net. London & Edinburgh: E. & S. Livingstone Ltd.

Rontgenologische Differentialdiagnose Der Knochenerkrankungen. By Dr. Hans Hellner and Dr. Hanno Poppe. Pp 903 with illustrations. DM 270. Herdweg: Georg Thieme Verlag. 1956.

The Management of Pain in Cancer. By M. J. Schiferin. Pp. 245 with illustrations. $4.50. Chicago: Year Book Publishers, Inc.

Mankind Against the Killers. By James Hemming. Pp. 231 with illustrations. 15s. net. Cape Town: Longmans, Green and Co., Ltd. 1956.

Modern Trends in Orthopaedics. By Sir Harry Platt. Second Series. Pp. 331 with illustrations. London: Butterworth & Co. (Publishers) Ltd. 1956.

Pathologic Physiology—Mechanisms of Disease. Edited by William A. Sodeman, M.D., F.A.C.P. Pp. 963 with illustrations. London: W. B. Saunders Company. 1956.

Handbook of Toxicology. Edited by William S. Spector. Pp. 408. Philadelphia and London: W. B. Saunders Company.

Advances in Pediatrics. Volume VIII. By S. Z. Levine. Pp. 273 with illustrations. Chicago: Year Book Publishers, Inc. 1956.

CORRESPONDENCE : BRIEWERUBRIEK

MITRAL VALVOTOMY

To the Editor: I have read with considerable interest the recent correspondence in your columns on mitral valvotomy. I have been particularly interested in the question of the techniques employed. While hesitating to raise once again what is purely a technical item, certain statements have been made which I cannot allow to pass unchallenged. Although these items are mainly technical I am sure they will prove of interest to most practitioners.

Mr. Phillips[1] claims that, with increasing experience, one is able to perform an adequate mitral valvotomy merely by finger fracture or splitting of the mitral commissures without employing the aid of a cutting instrument. Although he quotes Beck as supporting his view it is certainly contrary to the general trend and to the views of most thoracic surgeons. One is only too happy when one is able to achieve a satisfactory result with the finger. Inserting a cutting instrument alongside the finger usually results in a less perfect plugging of the opening into the auricle, and a certain amount of bleeding occurs around the finger, which is upsetting to the surgeon although not usually of any import. If it is considerable one must either employ a purse-string suture or else remove the instrument. Cardiac surgery imposes considerable emotional strain on the surgeon, which is certainly increased by inserting a sharp instrument which might result in splitting of the incision into the auricle; but one should be able to deal with such eventualities. Most thoracic surgeons have employed finger dissection in their early cases, but the majority, including men of vast experience such as Brock and Bailey, soon began to employ instrumental aids with increasing frequency. In my early cases I was often satisfied with the result of finger dissection and was only too glad to terminate the operation as soon as possible. The more I utilize a cutting instrument the more I realize how inadequate some of my earlier cases have been and I am keeping a careful check on a few of them. I am quite certain that eventually a few will require re-valvotomy.

One frequently finds that following a partial split with the finger no further progress can be made. In the past I have used quite considerable force and by hooking the finger underneath the commissure and pulling upwards I have increased the split. Looking back on these cases I shudder to recollect this unsurgical procedure. Following the partial cut of these commissures further finger dissection causes a remarkable degree of further splitting, and supports Brock's concept of the maximal adherence being present at the critical zone of the insertion of the chordae tendineae. In some cases the finger splitting is accomplished with almost ridiculously simple facility, and in several cases in children the lightest pressure has sufficed. However, in some cases even cutting the valve is extremely difficult and I find no one cutting instrument suitable for all cases. My armamentarium includes the Brock knife, the Bakst artificial finger-nail, the Dogliotti ring knife, the Bailey right and left mitral guillotine knives, the Doubost knives, and I even occasionally adopt Brom's suggestion of using a modified Strycken's conchotome for cutting difficult posterior commissures.

In some cases the essential part of the operation does indeed only take a few seconds, as Mr. Phillips says. However, in some difficult cases I have had a finger in the heart for 20 minutes.

I have now performed 3 re-valvotomies: one on an early case of my own and 2 on patients originally operated on by other surgeons, one a very well-known overseas surgeon. Re-valvotomy is a difficult procedure, with more hazards than the original operation. Patients submit to valvotomy with the confident expectation that the surgeon will do his best for them. Although some cases of recurrence are possibly due to a rheumatic reactivation, I am confident that the majority are due to an inadequate original operation. It is wise to utilize the favourable circumstances of operating on the virgin heart to do one's utmost to achieve the maximal improvement possible. The heart will tolerate more manipulation than we at first believed. Provided one is gentle and deliberate and makes a special effort to avoid dangerous effects of summation of stimuli, one can perform fairly complex manoeuvres on the heart. Naturally in a few cases one will decide that one must temper discretion with one's aggressive instincts. Availability of various instruments and the intelligent selection of the appropriate one does help. I find 90% of valves ideally suitable for valvotomy. The cusps are thin and supple and billow upwards markedly into the auricle during ventricular systole. But in some cases gross scarring and calcification are present. If the calcium is

present in the form of crags I leave this area strictly alone. If the calcium is in the substance of the commissure I find the Bailey guillotine the most effective instrument. I have had no instance of calcific emboli.

The usual size of the valves in mitral stenosis is 0·5—1 cm. in length, and it is usually possible to obtain an orifice with a length of 5 cm. or more.

Mr. Phillips is worried about the attendant dangers of producing mitral regurgitation. If the cut is accurately sited in the commissure and if one is particularly careful not to damage the medial cusp, then I feel that these fears are somewhat exaggerated. In 2 cases I have produced a regurgitant jet where none was originally present. I estimated this jet at 2-3 c.c. per beat, but found in each case, after cautiously increasing the opening and waiting a couple of minutes, that the jet diminished. Bailey considers a regurgitant jet of up to 10 c.c. per beat to be relatively insignificant.

I have frequently found sub-valvular stenosis of varying degrees due to adhesions between the chordae tendineae. I agree with Mr. Phillips that adequate tactile perception requires the ungloved finger and I always employ this method. In a recent case of closure of an auricular septal defect, I first inserted my gloved right forefinger to estimate the size of the defect and then employed the ungloved left forefinger while placing the sutures. The difference in the acuteness of perception is considerable.

I have only had one death on the table in over 150 cases. This incidentally is the only patient in whom ventricular fibrillation occurred and, although an apparently satisfactory electric defibrillation was performed, it recurred 1 hour after the chest was closed. In grade-1 and grade-2 cases I have had no mortality. In grade-3 and grade-4 cases my mortality has been 10%. In several of these latter cases the valve has been hopelessly deformed and the myocardium obviously very unhealthy. My definition of an operative death is that the patient fails to leave the hospital alive.

In the last 12 months I have performed 55 mitral valvotomies and have used the cutting instruments in 24 cases. The percentage of instrument valvotomies is still higher over the past 6 months.

I agree with both Mr. Phillips and Mr. Adler[2] that the publication of results after 5 years will prove instructive. The operation is a blind procedure and it is easy for the thoracic surgeon to bluff himself about what has been achieved.

I am sure that the persistence and doggedness of a man like Brock in achieving the maximal opening is the correct attitude to employ. Given an adequate mitral orifice, even a badly damaged myocardium will obviously function more efficiently.

Mr. Phillips mentioned that the adequacy of the operation has been checked by his physician colleagues. With due regard and respect for their capabilities, I must admit to grave doubts as to the validity of such opinions. If one only obtained partial opening of the valve the immediate result will be excellent, as even a small split increases the area of the orifice considerably and has resulted in comparative benefit in a patient whose orifice has possibly been the size of 2 match-heads. As yet we have no means of measuring the mitral-valve area apart from the direct contact of the finger.

The risks of rheumatic recrudescence in the average adult patient is slight and hence re-stenosis should be relatively infrequent. However, one must appreciate that the surgeon is operating to relieve the obstructed valve and can hardly be expected to give the patient a new myocardium.

I would like to add a final plea for physicians to appreciate that the earlier the operation is performed the less will be the strain incurred by the myocardium.

Ivan Barnat

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1 March 1956.

1. Phillips, W. L. (1956): S. Afr. Med. J., **30**, 204 (25 February).
2. Adler, D. (1956): *Ibid.*, **30**, 155 (11 February).

TEACHING HOSPITALS

To the Editor: I wish to draw your attention to an error in the Internship section of the 'Report of Sub-Committee to enquire into Medical Education and Internships'[1] as published in the *Journal* of 11 February 1956.

Dr. McMurray has classified Coronation Hospital as a 'non-teaching' hospital, whereas in actual fact the University of the Witwatersrand is making considerable use of the clinical facilities of the hospital for teaching purposes and 95% of the staff are 'joint appointees'.

I should be grateful if this fact could be published, for the obvious reason that the article as it stands is misleading to registrars, both presently and in the future, wishing to qualify for the specialist register.

M. Tonkin
Medical Superintendent

Coronation Hospital,
Johannesburg

17 February 1956

1. Report of Subcommittee (1956): S. Afr. Med. J., **30**, 141.

STATUS OF BARAGWANATH HOSPITAL AS A TEACHING HOSPITAL

To the Editor: In the *Journal* of 11 February 1956 a 'Report of the Subcommittee to inquire into Medical Education and Internship' is published. In this report under Section B, headed 'Internships' a classification of hospitals is made, in which Baragwanath Hospital is classified as a non-teaching hospital. This is incorrect.

Among the teaching hospitals in South Africa the Medical Council recognizes the Johannesburg Hospital and associated hospitals as teaching hospitals. Baragwanath and Coronation Hospitals are associated hospitals and teaching hospitals in association with the University of the Witwatersrand. Thus holders of appointments in this hospital qualify for admission to the specialist register in so far as the clause 'that he has had 3 years satisfactory clinical experience as the holder of a clinical appointment under the control of the department in a teaching hospital' is concerned.

It is most important that the status of Baragwanath Hospital as a recognized teaching hospital is made clear to all medical practitioners who may wish to apply for posts at the hospital.

J. D. Allen
Medical Superintendent

Baragwanath Hospital,
Johannesburg

21 February 1956.

1. Report of Subcommittee (1956): S. Afr. Med. J., **30**, 141.

[Coronation Hospital and Baragwanath Hospital are recognized by the South African Medical and Dental Council for the purpose of its rules governing the registration of specialities.—*Editor.*]

PUBLICITY IN THE PUBLIC PRESS

To the Editor: There is a growing practice of obtaining publicity in the lay press for certain academic and clinical work through interviews and photographs. I may say that the reports I have seen are characterized by gross inaccuracy and transparent ballyhoo but this only adds to the fact that they are entirely deplorable and demeaning.

It may be that there is nothing strictly unethical in this practice when full-time personnel are concerned but when, as recently happened, a practitioner or consultant in private practice becomes involved, lasting damage to this professional reputation may be done and the matter is extremely serious.

I wish through your columns to appeal to all editors of newspapers and periodicals to adhere to the rule that on *no* account should a practitioner's name be published in *any* connection (save his decease) in the lay press without his *personal* and *specific* approval. Only a clear understanding on these lines will prevent a situation arising whereby an undesirable publication with its consequent train of unpleasantness can be approved by an irresponsible third party.

G. R. Crawshaw

Princess Nursing Home
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2 March 1956.